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THE PEDAGOGICAL SEMINARY

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THE
PEDAGOGICAL SEMINARY.
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WHAT IS PEDAGOGY?[1]

By G. STANLEY HALL.

The Greek pedagogue, from whom the term pedagogy was derived, led the boy to and from school, and was his keeper rather than his teacher. The word has expanded from its etymological meaning and is a general designation for the art of teaching. Twenty years ago the term was not held in honor in academic circles and others were preferred. Years ago a classical professor in a vivacious article declared that, in his mind, it was associated with pettifogging and was a word that he always tried to avoid, and thought its connotations vulgar. In many minds it is still associated with teaching in the primary grades and for college and university work had little meaning. In the designation of academic chairs the term "Education" was preferred and if pedagogy had a place it was thought to be chiefly in the normal schools. Its respectability and its scope, however, have steadily increased in recent years, till I think we may fairly say it should now include both didactics or the methods of teaching or imparting knowledge or instruction generally on the one hand—all those processes by which information is given—and on the other, education or development from within outward. Thus we may properly speak of the educational value of all instruction, and we are coming to see this varies much for different subjects of the curriculum. Education is more humanistic and evolutionary, and aims to unfold all the powers of the individual to their maximal maturity and strength and is essentially cultural; while teaching, learning, and didactics generally consist in transmitting knowl-

[1] Introductory lecture to the popular Saturday courses, given at Clark University, Saturday, September 30, 1905.

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edge by the most economic and effective means from those older and wiser to those younger and more ignorant. The soundness of an educational system depends upon its educational value and, in our department, the great danger is that impartation will take precedence. The third section of our field may be called drill or discipline. This is essentially practice in habituation and in facilitating and reducing the time in which the mind handles the noetic material given to it. This we can impart as dressure or training even to animals and idiots for whom we cannot do much that can properly be called education. The term "teaching" means building into, and applies more to acquisition than to development. Influence involves more commonly the personality of the teacher, while suggestion is penumbral or marginal, and includes not only conscious hints but unconscious stimuli. Thus I would reserve for pedagogy the wider connotation of all these influences.

The condition of pedagogy in this land and elsewhere is far from satisfactory, but is slowly and surely improving. In the German universities, philologists have for several generations had seminaries of a more or less pedagogic character, designed, along with the impartation of knowledge, to make the teaching of the candidates for positions in classics more effective. Professors of both Catholic and Protestant theology, representatives of different systems of philosophy, and occasionally others have given pedagogic courses with the primary object of indoctrination and of inclining future teachers toward their several points of view. To-day in all Germany I can find but two or three professors whose chief work is pedagogy, and I doubt if in this country we should be satisfied with their work. It certainly does not compare favorably in intellectual standards with that found in the other departments. Histories of certain fields, grades or periods of education that are monuments of erudition, have been written by historians and others. Several normal, gymnasia and other teachers have occasionally given courses in the university, one or two of whom have never themselves taken an academic degree. Their work usually concerns itself with lower grades, and neither their colleagues nor the cultus ministry would favor the treatment of university policies with academic freedom. In the higher institutions of Great Britain little or nothing has been done, and the same is true in France. The best educational work on the continent is done, for the most part, by representatives of the secondary schools, especially in the German normal schools, where sometimes the history of education is taught with very great effectiveness, and is chiefly relied upon to give an *esprit du corps* to young teachers and to make them respect their vocation. Much of the best pedagogic literature in Europe is by the in-

spectors and supervisors, while school physicians, and occasionally literary men have made contributions of value. The best journals in Germany are very specialized and there is no such central organ as the *Revue Pédagogique*, and in England periodic literature on the subject is still more inadequate. In this country, until recent years, almost no academic work has been done. Professor Payne, in Michigan, was almost the pioneer. College and university presidents took no interest and some were actively opposed to the introduction of such a department. Authorities have been singularly without concern for the interests of their own graduates. In some institutions where a third of them teach for a time, there has never been anything in the courses that was designed to help them. This is sometimes due to apathy and sometimes to suspicion, sometimes to prejudice, sometimes to all combined. This neglect, especially in the girls' colleges and in institutions, seems to me almost reprehensible. The chief motive, however, that has stimulated the foundation of so many departments of education under various names in American colleges and universities within the last few years, has been the recruiting service it is hoped they may render in making easy and broad the way from high and preparatory schools to entrance classes. Many of these recent appointees are essentially recruiting officers of the institution and spend a good part of the year in visiting preparatory schools, seeking to find places for graduates of the college on the one hand, and on the other, to co-ordinate entrance requirements and high school curricula. A modicum of their time and energy is given in the institution to those intending to teach. With these limits of course very little can be done and that is mostly for high school work, because this is most nearly connected with the interests of the institution. In this work very great stress is often laid upon those matters pertaining to co-ordination of high school and college work. Sometimes conferences for teachers are held after school hours or on Saturday. In a few institutions, genuine and disinterested service to the public school system is earnestly sought but all this work carries great handicaps—now in the meagre time that can be devoted to it, now in the qualification of the instructors who are sometimes ex-school officers or those who would prefer to teach other subjects, and perhaps do so in part. The well trained academic professors, devoted heartily to pedagogy as a department, as well trained for their work as those in others, are very few. College presidents here would not favor teaching the history of higher education, or discussing academic questions, nor the advocacy of any methods disapproved by any large number of fitting teachers, so that the conditions, although steadily improving, are still very far

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from satisfactory, and we often hear in educational addresses from presidents and professors amplifications and illustrations of the fact that education is neither a profession nor a science.

We lack, but greatly need, three things.

I. A history of the philosophy of education. Plato, Aristotle, Bacon, Locke, Kant, Hegel, Herbart, Comte, Lotze, Bain, Herbert Spencer, and many others have attempted to lay down fundamental principles as to the goal and means of education and to give it a scientific character. These theories are each partial and, alone, inadequate They are usually based upon a theory of human mind, of nature, of society, or all of them, and appeal to far higher faculties, and give the subject a greater dignity than it yet had. Nor are these topics treated in a way hardly worthy of mention by the histories of education. I think it a matter of congratulation that a former member of this institution, who began the subject as his dissertation five years ago, has left his chair in another university for a year to go abroad and finish a greatly-to-be-desired textbook in this subject.

II. Secondly, we lack a history of education. There are, of course, plenty of manuals in the various languages, but they deal almost entirely with the lower grades, and none of them include academic work, the history of universities or learned societies, all of which are themes full of interest and even inspiration. This water-tight compartment between the higher and lower stages of education has operated greatly to the disadvantage of pedagogy. School men have little sympathy with academic history and spirit because they have little knowledge of it, and the converse is true perhaps in even greater degree. This is truer in the East than in the West. Where can be found material which is of greater intrinsic humanistic interest or importance or is itself a higher educational value than the story of the foundation and organization of the great universities in the middle ages, from Salerno down, as they were founded mostly in groups to express or secure some great cultural good it was believed mankind had attained? All of these great movements were profoundly affected and very often directly inspired by one or more of the scores of learned but always more or less secret societies which were founded in the various lands to keep alive the love of truth and to secure freedom of thought and investigation. Spiritual and temporal powers were sometimes opposed, and sometimes competed in this great work, and the development of popular schools is given a larger background and a broader mental horizon when treated from this higher standpoint. So, too, religious education has a history of its own which should be included in this field.

III. Third, we have no handbook which even attempts to summarize the results of the very special and more scientific studies made in particular fields. For instance, the psychophysics of the act of reading with adults, and the processes involved in its acquisition by children, have been made a subject of extensive researches which are fraught with weighty economic lessons for the school teacher. School geography has hardly yet made contact with the scientific geography of academic circles. For number work, the summarization of various memoirs and the harmonization of different partial standpoints is greatly needed. The high school teachers of history, despite their associations with university men, have never been made acquainted with the goal and methods of the great historiographers, with their different standpoints, schools, aims and methods. Nature study has undergone a radical transformation. Writing has been experimented on, but by those whose dominant interest was in the psychological laboratory, not in the schoolroom. We are greatly in need, therefore, of brief monographic treatments of each of the school subjects by authors capable of compiling practical results from various fields and languages, and all need to be brought between two covers for the benefit of teachers.

Let me now pass to a different aspect of this department. As it lies in my mind I should divide it into about six different fields, each of which ought to be represented, and, indeed, in some great ideal institution would be represented, by a professor who gave his entire time to it, for the field is large. You may say, therefore, if you please, that I am trying to describe an ideal academic department of pedagogy such as nowhere yet exists. In this I would have

I. The history of education treated broadly as I have above suggested, in a way that would put Quick, Gill, Compayré, Schmidt and the rest to shame, because of its scope. It ought to comprise an account of all the great endeavors of mankind to facilitate the impartation of knowledge and of virtue from higher to lower intellectual levels. It should have range enough to include all the great agencies from the kindergarten to the learned academy, to recent correspondence schools and industrial work, to the agencies by which religious and classical culture were imparted in the preceding centuries. It ought especially to have pregnant, meaty chapters on education in China, among the ancient Hebrews, in India, and be strong in ancient Greece and Rome; to teach something on the great work of the rabbis in the middle ages and I would have a careful chapter on primitive education as illustrated in savage races, past and present, a theme full of suggestiveness. The work I

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have in mind should be pretty well purged of the lumber of learning, should not deal much with critical questions, but should, above all, be edifying. This, I do think is not so ideal as to be impossible. On the contrary, a well trained young man who would work under competent direction and with the aids now available could, I believe, in two or three years, very nearly attain the goal I have in mind.

II. We need a didactics composed of one chapter for each of the leading topics taught in institutions of all grades. It need not be as freighted with literature or with details as Diesterweg, who is essentially superseded, but should include the utilization of the special researches above referred to; should also briefly discuss the educational value of each topic. We should be told something of what astronomy can do for the high school and the college pupil respectively, and how to secure the best results with reference and criticism to the best few topics only. So of the teaching of botany. We have a copious literature on plant names and plant lore as found among children. What, if any, is the pedagogical utilization of this new material? Much, too, has been written about feelings toward plants, flowers and trees. How should this be correlated with the utility cult so ably represented by my colleague, Professor Hodge? So of anthropology; has it not some place between geography in the lower grades and the university? What of the efforts within recent years to teach evolution in the schools without mentioning the name; that is, of having a text that should briefly résumé the development history of the world as known, avoiding disputed questions and undue interest on missing links, etc. So of the three R's, mathematics, geology, chemistry. Each of these needs to be treated in a broad cultural way, far above the range of the petty pedagogy made up of theories and definitions and abstractions which give the conceit of knowledge while taking away its substance. It need hardly be said that the various types of agricultural and other industrial occupations should be described in detail as actually installed not only in this country but elsewhere.

III. Organization. Here should be treated the construction of school boards according to existing and ideal methods, and everything comparatively in different lands. The pupil should be familiar with devices "made in Germany and France," the financial administration of schools in detail, school discipline, punishments, the training, tenure of office, position, teacher, functions of superintendents, supervisors, inspectors, of teachers' associations, meetings, the agencies for their further self-education.

IV. School hygiene. Perhaps the greatest word in all the vocabulary of education is health in its etymological sense of

wholeness, holiness, completeness. But now we have so much done in this field that it may be said to have pervaded almost everything. The school doctor and his functions, school diseases, their prevention and obviation, tests for the senses, school lunches, dietaries, programmes, lighting, heating, ventilation, form, structure and place of school buildings and their care, clothing, regimen, etc.;—all these are included; but far beyond them, school hygiene has invaded the domain of method, and not only seeks to determine hours and programmes, length of lesson, but how each topic can be most economically taught, that is, with least strain upon the eyes, ears, memory, attention, etc. The great enemy of the school is fatigue, which sometimes slows down activities to one-fourth their pristine freshness in the morning. How to avoid this and to have the work of the school done when the mind has its sharpest edge is the desideratum. Thus we can even speak of the hygiene of teaching reading, writing, the multiplication table, etc. We have two excellent manuals in English, but even these are utterly inadequate to represent the immense work that has been done in this field, all within very recent years.

V. Genetic psychology has surely justified a place for itself in the field of pedagogy. The Hegel and Herbart cults, which have flourished in this country, and are now declining, did great good. They were a Vorfrucht that broke up the ground and made it plastic and friable, but all the old philosophies had very much irrelevant matter. Now we know some things concerning infancy, childhood, and adolescence which are of immediate and pressing importance, although we must not fail to admit and recognize that there is another great group of questions that are uncertain, and still a third as yet unknown and perhaps insoluble. We have learned how the senses develop, something about primitive forms of association, a wealth of concrete facts about fear, anger, pity, sympathy, emulation, nervousness, attention, memory and will. Certain nascent periods are established. Child study develops a new interest in the object of education, whereas we have chiefly cared for the material of instruction and methods. It tends to develop the parental attitude, especially the instincts of motherhood inherent in every woman, and women are coming to do the work of our schools. It shows us that buildings, methods, subjects, everything, are only means to the end of maturing the child. It has convicted us of many vicious practices, confirmed us in some of which we were uncertain, and moreover it is slowly developing a methodology of its own that has some educational value for teachers, and in my enthusiastic belief it has in it more promise and potency of making the work of teaching professional and scientific than all other agencies combined. It has taught

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us to utilize the play instinct and the value of different plays, the importance of suggestion and imitation and the psychic significance of many problems. I believe its ultimate goal can already be dimly discerned, and that when it is finished it will reveal the fact that everything in education should be primarily moral, that there is no other standard or ultimate criterion of value, that the purpose of the history teacher is to make the children better by good examples, the object of myth and story is to preform their moral choices, of art to give them exalted moral ideals and save them from low ones and of science to teach them how to live. This department, too, puts the school in rapport with all the vital studies of life and mind. I believe it is the goal of all the philosophies of education, the story of which I spoke above in the first "lack," and that they will all ultimately be reduced to the rôle of diverse prophecies of its dispensation.

VI. I must add one higher field not generally recognized, but which I believe essential to a broad and truly philosophical conception of the work of the teacher of education and that is the race pedagogy, or the education of the different ethnic stocks of the world. Civilization is man's domestication of himself. Sometimes he has thriven under it and sometimes aborted. Our civilization may sometime go the way of that of Greece and Rome; and other stocks, as obscure now as were the Germans and English at the Christian era, may wield all the accumulated resources of Christendom. The duties of superior to inferior groups of men in this day, when all of the latter have been included as colonies or in spheres of influence, seems to me an anthropological question which culminates in a pedagogy which is larger and higher than statesmanship itself and should teach it. The ethnologists who have studied the Indian can tell us more how to treat him than all the Lake Mohonk conferences and hence I would have an educational department devoted to the influence of superior to inferior races. I would have it concerned for questions of industrial exploitation, labor, contracts, hygienic rules where they can be enforced. I would have it learn sympathetically the many good things found among these primitive people. I would have it especially seek to develop a higher pedagogy of mission work so that we shall be advanced enough to know that, at a certain grade of development, fetchism, at another Confucianism, at another Buddhism may possibly be best, and that Christianity is the highest and perhaps may be all the better because of good apprenticeship to certain lower stages and forms.

Thus you will see my conception of education is that it is almost as broad as what biology calls environment, and that church, state, literature or culture generally are to be meas-

ured by the ultimate standard of what they do to bring the individuals delivered to us from the womb to the very highest possible maturity they can attain. One thing is certain. If evolution is true, the time will come, as certainly as the sun will rise to-morrow, when it will be the basis of a new harmony, unity and organization of the sciences, and instead of being the Cinderella in their circle it will supply the criterion by which they are all judged, it will grade and evaluate each product of culture. This is certain to come when we fully realize that the paltry thousand million people living on the earth to-day are but a petty handful compared to the vast cloud of witnesses that are to rise in the unfathomable future of the race, and that the supreme test of all that we are and do is measured by its service to the countless multitude who are to come after us and who are more worthy than anything else of our supreme regard and service.

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LEARNED SOCIETIES AND ACADEMIES IN EARLY TIMES.[1]

By EDWARD CONRADI, Ph. D.,
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INTRODUCTION.

"The history of Italian academies, written not according to their exterior but according to their secret tendencies, would not only be an interesting chapter in culture history, but would open deep vistas into the political conditions of the people and the country." These words of Reumont, written in 1857, would suffer neither in truth nor in force if they included other than Italian academies, and it can only be regretted that Reumont's suggestion and example did not bring forth earlier results.

The history of learned societies has not yet been written and it is not here the intention to perform that task. It is rather the aim, (1) to give, as far as possible, an outline sketch of the development of such societies from early times with special emphasis on the period covering the Renaissance and the Reformation, and (2) to suggest the influence they have had on the development of thought with special reference to educational movements. Very little has been done in this field in English. The Germans with their keen historical sense, have made a beginning, but only a beginning. To what extent a continuous history can be written the future only can tell. From 529 A. D., when Justinian suppressed the Platonic academies, for about eight centuries little or nothing is known of their existence. Whether during this period there were any societies of learning is not yet definitely known, and may never be known, since their very existence depended upon the thoroughness of the secrecy they were able to maintain. Further research in this field, however, may bring forth valuable results. From the time of Plato till 529 A. D., and from the time

[1] This study was nearly completed while the writer was an honorary fellow in Clark University, and he takes pleasure in acknowledging his great indebtedness to Dr. Wm. H. Burnham for suggesting the study and for valuable suggestions and references to literature; to Pres. G. Stanley Hall for suggestions and criticisms and for the use of his private library; and to Dr. L. N. Wilson for invaluable aid in securing rare books.

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of the Renaissance till the present time—though much remains dark—the history of academies is better known and forms a valuable part of the culture history of those periods. Our histories of education, however, ignore the subject almost completely.

It is strange that the history of learned societies, especially of that period covering the dark ages, has not been studied earlier with great thoroughness. For it is now known that during the 15th, 16th, and 17th centuries these societies, usually secret, were the places where the pioneers of free thought and of science, such as Galileo, Bruno, Andreae, Comenius, Leibniz and a host of others could work out and exchange their views unmolested; and it may have been such societies which determined to a large extent the time of the Renaissance, and which, even while under the ban, may have carried through the dark ages the lamp of learning at which Dante and Petrarch lit their torch—Dante and Petrarch, "the two great pillars which encase the door through which we enter the great revival of learning."

As to the question when did learned societies begin to exist, very little definite can be said. One might almost as well ask when did man begin to think? Schleiermacher thinks that in the very need of science there is the need of the scientific society. He says the very impulse toward knowledge leads necessarily to communication and community of all sorts, and that the public institutions which this requires arise absolutely voluntarily and need the state only in their further development, but only to be protected and favored by it.

Early Greek, Egyptian and Arabian Academies.

The Greek Academies. The word "academy" immediately reminds one of Plato, and the name undoubtedly comes from the school which he founded. It is well known that this academy existed for hundreds of years, and when we, after the dark ages, again meet the name in Italy it refers to associations of scholars who devoted themselves chiefly to the study of Plato, and who in their aims and in their forms had a surprising similarity with the aims and forms of the Platonic as well as the Neo-Platonic academies. However, such associations of scholars were known in Greece before the time of Plato.

Philosophers are now convinced that early Greek philosophy developed in religious schools similar to those of Plato and Aristotle. Diels says it seems to him certain that Thales stood in the midst of a circle of eminent pupils who wanted to make practical and scientific use of mathematico-natural science. Though Thales left no writings he was known to, and attacked by, later thinkers, and according to ancient tradition this school

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had a direct succession from Thales to Anaximenes (about 600-500 B. C.).

That the Pythagorean and the Eleatic schools had a close organization is well known, and Diels says that it is certain that the strict organization of these schools has influenced their great achievements just as the *common* work of the academy has influenced the Platonic-Aristotelian system.

A very dense veil shrouds the atomistic school. Not only is tradition as to this important school meagre, but its valuable literature has been destroyed almost to the last line. However, the writings of Leucippus, the founder of materialism, have so much similarity with those of Democritus that they might be fused with them, a similarity which points to a close contact as it is possible only in a well organized school. Moreover, Democritus was a man who, according to Aristotle, had thought about everything. The catalogue of his writings as well as the few fragments of his works which have been preserved show that he was active in all the domains of knowledge: Cosmology, Anthropology, Psychology, Logic, Mathematics, Astronomy, Poetry, Grammar, Ethics, etc. The field of activity is indeed so wide that we must assume that some of these writings are spurious or that there was a masterful organization which collected this wealth of material and worked it over scientifically. This encyclopedia gave a model for Aristotle's all comprehensive work which he could carry out only with the faithful co-operation of his friends and pupils.

Diels says of this school: "Soon after the time of Alexander this beautiful structure was a ruin. Only a few pillars have, without severe mutilation, been built into the Garden-house of Epicurus. But this scanty remnant of that former glory, as it is manifested by the letters of Epicurus which were dug up by Pierre Gassendi, has given the foundation upon which the magnificent structure of modern science has been erected."

Information about the inner organization of these schools is very meagre, and, since knowledge as to the subjects and methods of instruction is scarce even in regard to the Platonic and the Aristotelian schools, we can scarcely hope that tradition will give us further light as to the older schools. That the Peripatetic, the Stoic, the Epicurean, and the Platonic philosophies were handed down by organized schools, is well known and yet we know little of the inner workings of even the Platonic and Aristotelian schools. Plato founded the academy and provided it not only with a meeting place but with sufficient revenue for its support. The estate he bequeathed to the muses, and therefore, when in 529 the Greek gods were dethroned by Justinian, the property reverted to the state. The work of the

academy was directed by a leader who was elected by a majority vote of the members. Not only was philosophy studied, but zoölogy, botany, geography, mathematics, and astronomy, were cultivated.

Like the academy, the Peripatetics also had a garden and halls, but in addition had some residences for the members to live in. Wilamowitz says the real estate and mostly the slaves, house furnishings and books belonged to the leader and he transferred the real estate by will to his successors. In case more than one heir was designated, they elected from their midst the leader. Though by this election the other members gave up all claim to leadership, yet in such case the school was divided into two groups, *members* and *pupils*. The pupils could participate in the cult, feastmeals, use of books, etc., and could attend lectures, but they could fill only the lower offices of the school.

There was no revenue producing capital. The pupils paid certain monthly dues, the members not. The financial affairs were attended to by the leader whose private accounts were not separated from that of the school.

Besides a leader the school had a number of minor officers such as the monthly Headship, a Supervisor of Sacred Rites, and a Curator for the worship of the Muses. The customary monthly Headship supervised the conduct of the members and collected nine obols from each member to provide for the monthly feast.

Never, in the history of the world, has the sublimity of striving after scientific truth been felt more deeply and more keenly than with the Platonists and the early Greek thinkers. It was the true religion for them. Science presents to them "the question of life and death before which everything earthly to which one may attach his love must vanish." Aristotle says, only that soul can raise itself to the "ethereal habitations of the gods" who has reached by true scientific endeavor the highest goal of man. Usener says that, excepting medicine, mathematics, astronomy, mechanics, and grammer, the achievements of Plato and Aristotle and their immediate pupils in the domains of mental and natural science stood unequalled till recent and partly till quite recent times.

The influence of these achievements on later thought is so well known that it needs no furthur mention here; the important thing for us to note here is that these giant attainments must be ascribed to academies rather than to schools as we understand the term. Usener says it is wrong to consider these schools (Plato's and Aristotle's) as a number of pupils flocking around a master. They were organizations for research as well as for learning and listening. Their membership included

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the whole series from the youth first approaching scientific studies to the independent investigator. And Zeller says: These Greek schools were not only unions of teachers and pupils, but they were at the same time organizations of scientists. They had the character both of a school and an academy. The organization had a leader who directed the work but it occasionally happened that some of the older men who remained in the society after their student years surpassed the leader in scientific attainment and in fame.

It may, indeed, not be far amiss to say that the greatest progress in the extension of human knowledge has been made by those seekers after — often martyrs for — truth, who scorn the restrictions of sect or school and who recognize no criterion but truth itself. Those great universities of to-day who set the milestones in the domain of science can do so only because they offer a free field of activity for the best scholars of their time — because they are built on the fundamental principle of all academies, "Freie Forschung und Freie Lehre," the very principle which has made them, and will ever make them, the leaders of thought.

The Alexandrian Academy. The battle of Chaeronea, which doomed the freedom of the Greek states, also gave the deathblow to free and independent thinking in Greece. About the same time the Ptolemies in Egypt saw that to save their own sovereignty they had to contrapose the culture of the Greeks against the dead wisdom of their native scholars and priests. They founded at Alexandria a great museum and two magnificent libraries and invited scholars to come there to study. Thus it happens that about three centuries before our era, on the banks of the Nile, we find the beginning of probably the greatest academy the world has ever known, making Alexandria the intellectual centre of the world. It was here at Alexandria, according to Baer, in the museum, where for the first time men from all parts of the then civilized world assembled with no other purpose than to extend the domain of human knowledge according to their own desire and inclination, and where the house of the Ptolemies, with lavish hands, furnished the means so that the scholars were not troubled with any cares for the necessaries of life. There were similar intellectual activities at Pergamon, Antioch in Syria, and other places, but all were completely overshadowed by Alexandria.

Baer says that here in Alexandria, where the ideas of the Egyptians, the Greeks, and the Jews clashed, science was born. In Alexandria we find the first physical apparatus and the first physical experiments, and here, by an examination of the human body, a basis was laid for medicine that lasted till the beginning of the 16th century. Here philosophy and history

of literature were born and mathematics was cultivated by Euclid. Here the first attempt was made to measure degrees and the first catalogue of the stars was constructed; also the astronomical system of Ptolemy was developed which prevailed for over a thousand years. Strabo here also collected much of his material for his geography. And, furthermore, how much more of ancient culture would have been lost had not the manuscripts been collected here and multiplied by numberless duplicates by the copyists? Baer says the influence of this academy, which was such not in name but in reality, is immense. He says it is here where science first emerged out of its poetic form, and adds: "We, after two thousand years in this place and at this time, on the banks of the Neva, are under the influence of Alexandrian astronomy."

The intellectual activity at Alexandria extended over nearly 1,000 years. But this very long period falls into two divisions. The first period is characterized by its literary and scientific activity and lasts from about 306 B. C. to about 30 B. C. It was an attempt to continue and develop under new conditions the old Hellenic culture. The second period, from 30 B. C. to 640 A. D., is a period of philosophy and is largely determined by Jewish elements. It was in this period in the early centuries of the Christian era, when Greek philosophy and religion met Oriental philosophy and religion, that Neo-Platonism was born. It was in the early years of the third century that Ammonius Saccas inspired his pupil Plotinus who, in turn, about 244 A. D., founded a school of philosophy in Rome. This school was followed by others. These Neo-Platonic schools, however, were founded especially for the propagation and development of certain doctrines, and do not exactly correspond to what we today would call a learned society, yet they were probably the forerunners of the later Italian Platonic Academies and the carriers of Platonism and that Socratic elenchus which finally broke through the darkness during the middle ages and ushered in the dawn of day. It is important to note that Platonism and Neo-Platonism were, in the words of Harnack, the source from which in the age of the Renaissance and in the following two centuries, empiric science developed in opposition to the rationalistic dogmatism which disregards experience. Magic, astrology, alchemy, subjects which were of the keenest common interest to the later natural philosophers of Europe, and which gave an effective impulse to the observation of nature, and consequently to natural science, were closely connected with Neo-Platonism.

Arabian Academies. During the centuries when Platonism and Neo-Platonism were suppressed and seemingly forgotten in Roman Christendom, it was the Arabians who carried forward

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this heritage. The schools founded by Harun-al-Raschid and al Mamun at Bagdad, Kufa, Bassora, Bochara and other places, about the time Charles the Great was gathering the wisest men of his time about his throne, were schools rather than academies, but it is well known that the above named califs made great efforts to get men of learning to their courts. Mamun, for instance, offered a great sum of money and eternal peace to the Greek Emperor Theophilus if he would give for a time the services of the famous mathematician Leo; an offer which the Emperor rejected in order that science might remain a preference of the Greeks. And Baer says that the famous Orientalist Frähn told him that in the 10th century there existed a society in Bassora called *Ichwan-al-safa* (Brothers of Purity) which exactly resembled our academies of to-day. They even published proceedings (Sammlung Abhandlungen) in which are treated philosophical, physical, mathematical, and theological subjects, and which are preserved to the present day. There was so much liberality (Freisinnigkeit) in these proceedings that later an *auto-da-fé* was held over them in Bagdad.

The most famous Arabian academy, however, was that at Cordova in Spain. It was so famous in its time that scholars flocked there from all parts of the then civilized world. They came from France, Germany, Italy, England, Greece, from North Africa, Syria, Arabia, Persia, and even from distant India to study there or to live for science and poetry which were flourishing under Hakem II. This prince even sent representatives to the larger cities of Africa, Egypt, Syria, Arabia and Persia to either buy or copy the best works. In this way he gathered a library variously estimated at from 400,000 to 600,000 manuscripts. The catalogue, according to authentic sources, contained 44 volumes.

There were other schools in Spain, but Cordova was by far the most famous. It was an academy on the Alexandrian type. Hakem II demanded nothing of his protégés but to complete the researches and other works they had begun or had promised, and did everything in his power to secure for them the means and the leisure, and even gave up his palaces to them. Moreover, Aschbach reports a society of 40 scholars and poets who during the winter regularly met at the house of a priest in Toledo for scientific work. This is very much like the beginnings of the later Royal Societies of France and England.

Among the Arabian philosophers, Averroes (died 1198), whose writings were known to the entire cultured Occident, was probably the greatest. His doctrines, which found acceptance among the heretics, were considered heretical by both Moslem and Christian. The literature of the Averroists is mostly destroyed, as is the case with all parties that were persecuted by

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the church, but from the attitude of their opponents it seems that they were convinced that the Averroists formed a well organized society. Voigt says: "It seems that the Averroists were a kind of secret society which held together by a secret understanding and pass words (Stichworte), and which, by its ramifications and its position beside the church reminds one of Free Masonry." (Cited by Keller.)

It is important to note that Dante and Petrarch grew up in this atmosphere, and what these two men, especially the former, mean to the world need not be restated here. On March 10th, 1302, Dante was condemned to be burned at the stake, and from that time till his death he was a wanderer in the wide world and not only tasted the bitter and the sweet that always come to the great champions of individuality and of freedom, but lived face to face with the philosophy of his time. With admirable independence he brushed aside the traditions and the language of the church by denying the church the right to use force in matters of religion, and by writing the master creation of his genius in the language of his people, thus demonstrating to the world that Greece and Rome had not exhausted language and showing the possibilities that lie hidden in the vernacular of common folk.

Two years after Dante had gone into exile, Petrarch was born. He was a student of philosophy, and through the study of the Greek language became a warm admirer of Plato. He also was finally accused of being a magician and a heretic and was even suspected of being a leader among the Averroists. In his old age, however, he was converted to the Roman Catholic faith and devoted his last years to defending it. Among the men whom Petrarch especially tried to convert to the faith was Ludovico Marsilio (died 1393). This man was at the head of a society sometimes called *Academia di San Spirito*, to which Coluccio Salutatis and Niccolo Niccolis belonged. It was Niccolis who persuaded the famous Platonist, Manuel Chrysoloras, a pupil of Plethon, to stop for a while at Florence and to thus become the teacher of many men who belonged to this society. This academy is known in history simply as a literary society, yet it had among its members poets, philosophers, scholars and artists. Moreover, it seems that Platonism was dominant here as in later Platonic academies. Here, Keller says, we meet the first traces of the close working together of science and the arts, which has given the real stamp to the great period of the Renaissance.

Italian Academies.

What became of the Platonic academies from the time Justinian suppressed them, in 529 A. D., until they again began to

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flourish in Italy about 800 years later, is not known. Keller thinks it is altogether improbable that these academies which had braved all storms and all changes for a thousand years should be destroyed with one stroke. He says that doubtless these experienced men ceased to work in the forbidden forms, but that it would be remarkable if they could not have found secret means to follow their ideals in legally permitted institutions until such a time when the academies could again appear on the surface.

Keller says the word "academy" appears in Italy as early as 1439 in connection with Bessarion's name, but that that is no evidence that no such organizations existed before that time. As we shall see, for instance, the pupils and followers of Plethon formed a kind of society or academy and the church was issuing decrees against similar societies more than 150 years earlier. The history of these Italian academies is difficult to follow because they are secret societies. Their constitutions, their symbolism, their signs, their list of members, their highest religious convictions were withheld from the public. It was at the time often said in Italy that the Platonists live in their academies, "like the Greeks formerly in their Trojan horse." This secrecy, made necessary by the severe persecution of the church, made it almost as difficult for the historian of their time as it is for the later historians to study their history.

That there were societies as early as the 13th century is shown by the decrees of the church councils and of the Roman Curia. The Council at Valence under Innocent IV, in 1248, forbade, under penalty of excommunication, the societies which were held together by oaths and pledges. This seems to have failed to produce the desired effect, and so in 1282 at another council at Avignon even stricter regulations were passed. The council at Avignon of 1327 again emphasized these regulations and specified more in detail the character of these societies. According to this decree there were forbidden societies in the church which had their chief, their feastmeals, mutual pledges of brotherly assistance, signs and symbols, and a society uniform. The fact that these decrees were expressly directed against societies which had existed since ancient times, shows that this is probably an old struggle, that the church was dealing here not with local societies but with a strong and wide spread organization.

Keller is undoubtedly right when he says that the banishment of the Greek gods did not mean the extinction of the fire in the souls of the Platonists. If it be true that they continued their activity in other legal organizations it is probable that they entered the inner circles of labor guilds, since mathematics and geometry, which were of so much importance to some of the

most important trades, were assiduously cultivated by the academies, and since later in the middle ages we find many points of similarity between the academies and labor guilds, whose inner circles were often called *academy*. Furthermore, it is held that Christianity in its early years found its first and strongest foothold among labor guilds, since their idea of brotherhood had much the same in spirit as that represented by the Christians. Ward says that history shows that Christians planted into, and for the first two hundred years derived their sustenance, support, legalization, and economical life from labor unions of the ancient world. He says the word *ecclesia* and *diocese* came into the church through the labor unions, they applied this word to their houses of worship. He says the prechristian trade unions possessed their temples as common property around which were the graveyard, the grove, and many fixtures for meetings, discussions, entertainments and comforts of every kind, and that these temples gradually developed into churches.

We know also the close relationship between Neo-Platonism and Christianity, and that heretical sects in later years often maintained themselves in labor guilds; therefore, at least the possibility exists that Platonic ideas were carried through the dark ages by these guilds. Moreover, considering the pertinacity with which not only the Italian academies maintained themselves during times of persecution, but also how the heretics maintained themselves secretly and yet unitedly even from the early Christian centuries up to the time when intelligent people were permitted to call "heresy" enlightenment, and how easy it was for Platonic ideas to find enthusiastic supporters in Italy and otherwheres, it is not entirely a cry in the dark to say that these academies have had a continuous existence in some form or other from the time of Plato till now.

After the suppression of the Platonic academies, the church riveted its dogma firmer and firmer and freedom of thought seemed to be doomed. The church fought against all heathen philosophy, but finding it necessary to justify its dogma by means of reason, she finally used the Aristotelian logic to accomplish her ends. This scholastic dogmatism degenerated into such dry formalism that no independent spirit could live in its shackles. But how live outside of them so long as the church was with blighting hand withering every sign of verdure it could find outside of its pale? Probably best by replacing one authority by another; by replacing the degenerated church Aristotelianism by the ever living Platonic passion for truth, a passion which has appealed to all great minds in all ages.

Schultze says the great struggle in philosophy for several thousand years has been between Aristotle and Plato; "as one

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of these stars sinks below the horizon and the other rises, a new era in philosophy begins." The important thing in this return to Plato, however, was not so much the study of Plato as the emancipation from the authority of Aristotle, and this meant nothing less than the emancipation from the yoke which church scholasticism had placed upon mind; as the spirit threw off the chains of Aristotelianism it ushered in the age of free thought and criticism. There was Platonism in the church, it is true, but only the idealism of Plato; the church took no account of the master's questionings, of that Socratic elenchus which has been and still is at the bottom of all progress in all the domains of human activity.

The Florentine Academy. True Platonism had been in Italy among the early leaders of Renaissance, as we know, but the man who breathed a new life, a new enthusiasm into it, and who thus was probably the father of all later Platonic academies, was Gemisthos Plethon, of Greece. Plethon (1355 - 1450) was a man who had the greatest reputation for his wisdom and his justice. It is said that people, even the wise and the great, came from all corners of the earth to see him. He was a great teacher and had gathered around him a kind of society, a sect of followers, as he himself considered it. Manuel Chrysoloras and the later famous Cardinal Bessarion were among his pupils. Bessarion was his pupil since 1415 and was near him till 1436.

Plethon stood in great favor at the court and for a long time held an appointment as judge. When the great union council was held at Florence in 1438 to bring together the eastern and the western church, Plethon was sent by the emperor as a representative of the east. It is said, however, that he had no interest in the union of the two divisions of the church, but devoted his energies toward expounding his own ideas to the Italian people. Schultze says: "It was not the consultations at the council, but rather the free intercourse with the Romans that roused the activity of Plethon. In those dry sessions he spoke dry words which did not come from his heart; it was in living conversation, that came from the depth of his soul, that he kindled the Italian spirits into such a glow that they lit up, not only Italy, but later the whole of philosophizing Europe." Plethon found in Italy already an enthusiasm for the Greek muses, and especially for Plato in philosophy, and so he was listened to with the same enthusiasm with which he spoke.

Gregorios Monachos, one of his disciples, says: "The best of the Romans were so astonished at the irrefutable proofs of this man that, though they at first tried to refute him and made numerous efforts to do so, they finally gave up all their self-conceit and expressly admitted that they knew nothing."

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From him, however, they wished to learn, and in his friendliness he was quite ready to give them his assistance. — Hieronymos, another contemporary, said: "How the Romans were astonished at his wisdom and his virtue and the power of his speech. He shone amongst them more brilliantly than the sun. Some praised him as the common teacher and benefactor of man, others called him Plato[1] and Socrates." Amongst these admirers was the young Pomponius Laetus, later the leader of the Roman academy.

Villari says: "So admirable were his writings that it was difficult for the best philologists to distinguish them from those of the brightest period of Grecian literature." And Giacomo Leopardi, than whom, according to Villari, there can be no better judge, says: "with such abundance and weight of authority, with so much sobriety, power, and elevation of style, purity and refinement of language, that the reader is tempted to pronounce Gemistos, the equal, in all save antiquity, of the great Grecian writers of old. And this was the verdict of the learned of his own land in his own age." (Taken from Villari, Life and Times of Savonarola.)

It was due to the inspiration given by Plethon that Cosmos the Great founded the Florentine academy whose fruitfulness for the study of Plato and so also, not only for philosophy but for all humanistic science, has been of the greatest importance. When Plethon saw that he had kindled a passion for the new ideas in Cosimo, he went a step farther and communicated to him his cherished plan of establishing in Florence a revival of the ancient academy that had won so much glory for Greece. Cosimo was enchanted with the plan, took it up eagerly and set to work to carry it into effect. As soon as Gemistos had left Florence, however, Cosimo saw that the Platonic academy could not possibly flourish without some ruling spirit at its head. Hence he had Ficinus, the son of his physician, educated in Platonic studies, and with so much success that Ficinus translated the works of Plato and of the Neo-Platonists so masterfully that they have been reissued from time to time till the present day. To this great circle of Platonists who considered Ficinus their teacher, Reuchlin, the advance guard of humanism in Germany, belonged. And Reuchlin's teachings in turn were the foundation of Melanchthon's humanism, so that Plethon's influence is present in the German Reformation.

Upon the death of Plethon, Cardinal Bessarion wrote a letter

[1] It was here in Italy that he added Plethon to his name, which was Georgeos Gemistos; Gemistos means *full* and Plethon means *full*. Schultze supposes that he probably adopted *Plethon*, having the same meaning as Gemistos and sounding more like *Plato*. His enemies, at least, took this change of name as a sign of his arrogance.

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to the sons, saying: "I have heard that the father and leader has gone to heaven leaving behind all that is earthly, in order that he may dance the mystic dance with the Olympian gods. I am glad that I have had the companionship of a man than whom Greece has produced none wiser since the days of Plato and Aristotle. If one would assume the endless transmigration of souls as taught by Pythagoras and Plato, one could not hesitate to believe that the soul of Plato had come down and chosen the body of Gemistos for its abode. If you do not feel the greatest joy to be descended from this man, you do a great wrong. To bewail such a man is not proper. This man made Hellas famous and will be its ornament in time to come. His memory will not fade; his name and his fame will be handed down to posterity with everlasting praise."

In Italy Plethon's name was not forgotten. In the Florentine Academy Plethon was revered as the prophet of Plato and he was looked up to almost as a new saint.

As to the organization of this Florentine Academy Brandi says it had no statutes and no organization. The members were held together by their own love for learning and by the personal influence of the Medici. They met in the splendid country villas of the neighborhood, mostly in Careggi; they held plain meetings on the blooming meadow or on the mountain top; or they held a great social banquet on the model of the Platonic Symposium. Such a banquet was held regularly on Nov. 7, the birthday and the day of death of Plato.

The Roman Academy. The Roman Academy is one of those of which we know most, and yet we do not know its origin. We know definitely only that Pomponius Laetus was at the head of it for some time. This man, as we have seen, in his youth, had heard Plethon in Florence, and was undoubtedly inspired by his enthusiasm.

Laetus was born in 1428 in Dianium as the son of Prince John Sanseverini. He seems, however, not to have used that name but appeared as Peter of Calabria and later under the humanistic name of Giulio Pomponio Leto. A family quarrel caused him to leave home, and giving up all claim to his descent, he went out into the world to make a career for himself. He first went to Sicily, probably because he had friends there; later he came to Rome to be near Laurentius Valla, for during the reign of Pope Nicholas V (1447-1455), and under the influence of Cardinal Bessarion great liberty was enjoyed by the humanists in that city. Keller thinks that we may safely assume that the academy already existed at this time. For reasons unknown, Laetus crossed the Alps and went into the valley of the Danube, from whence he went to Bohemia and to Poland. Then he turned and went to Greece returning to Italy by way

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of the Ægean Islands. He settled in Rome, purchased a home of his own in which he organized a museum, and we soon find him at the head of the Roman Academy.

The descriptions of this, as of other academies, vary according to the sources from which they come. The church, quite naturally condemns them severely, whereas more impartial historians take a quite different view. Pope Paul II said of the Roman Academy in substance: "They deny the existence of God. They declare that there is no other world than this, that the soul dies with the body, and that accordingly, man may give himself up to the indulgence of his passions without any regard to the law of God; all that is needed is to avoid coming into collision with the temporal power. They despise the commands of the church, eat meat on fast days and revile the Pope and the clergy. They say that the priests are the enemies of the laity, that they have invented fasting and forbidden men to have more than one wife. Moses, they teach, deceived the Jews, his law is a forgery; Christ was a deceiver, Mahomet a great intellect but also an impostor. They circulated predictions of the speedy death of the Pope when a new election would bring about a complete change in the state of affairs.

Most of what we know of this academy comes from the popes, who were hostile to it. The best representatives of these academies emphatically call themselves Christians, though orthodox theologians again and again call them heathens and atheists. Impartial modern historians do not take these charges very seriously; they realize that, though most flocks have their black sheep, the leaders of these academies were usually men of high ideals.

In 1468, however, Paul II accused members of the Roman Academy of heresy and ordered Laetus and about 20 "poets" and "philosophers" arrested. Many of the members were absent, some were arrested and tortured so severely that it is said many of them died. Laetus was in Venice at the time. Here he lived three years in retirement. But when the Pope asked for his extradition, Venice yielded and he was led to Rome and in chains he had to parade the streets. In about a year all were given their freedom, the academy was dissolved and all threatened with punishment as heretics if they would violate this decre. The trial, however, threatened to develop a great sensation, because the academy had powerful friends. Cardinal Bessarion, for instance, when the trial was in progress (1469) issued a pamphlet defending Platonism, and opened his house to students and lovers of Plato, not only of Italy but of other countries as well. Neighboring countries became mixed up in the affair. King Ferdinand of Naples was a protector of academies and they had powerful friends north of the Alps; in

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short, their connections were such that even Paul II had to draw in sail and give the prisoners their freedom.

After the Roman Academy had been dissolved we hear nothing of it. The members kept absolute silence, contemporaries say nothing except record the common gossip of the day, and we should suppose that this academy ceased to exist after the persecution. However, in 1852, DeRossi found the name of Pomponius Laetus and others written on the walls of the catacombs. Many of the names are unknown and have thus far not been solved. Pastor, who represents the Catholic view, says, since these "modern heathens ventured into the venerable vaults of the catacombs where the very stones preach the gospel, to scrawl flippant inscriptions on the walls," we cannot wonder that contemporaries called them heathens rather than Christians. Keller, who represents the opposite view, says: "It is not too far fetched to believe that in these subterranean temples, filled with hallowed memories, these faithful servants of truth in secret kept burning that torch of progress which the powers that were so often tried to befog or destroy.

When, in 1471, Sixtus IV came to the throne he followed the opposite course of Paul. He recognized the academy. Their meetings were open; bishops and priests belonged and they obtained many valuable privileges. It was supposed that with the establishment of privileged academies the free academies would cease. The former, however, had not only literary men as members, but their membership included kings, princes and nobles, scholars, poets, builders, sculptors, masons, and even men without qualifications. That such a society is not the means for men of high scientific ideals to accomplish their aims seems natural. So it came that beside the public academy there continued to exist the free and secret academy. Laetus remained at the head of both till his death when he was followed by the poet Angelo Coluzzi seemingly as head of both academies. It is difficult to follow the history of the academies, but certain it is that in the middle of the 16th century Pope Paul III (died 1549) looked upon certain academies as hotbeds of the Reformation. And it is known that the Inquisition held that the pamphlet "Sommario della Sacra Scrittura" (The Sum of Holy Writ) which was widely circulated over Italy in 1535 and was one of the most famous of all reformation pamphlets, had originated from the academies; and the pamphlet actually found some defenders in the academy of the Grillenzoni, in Modena, in 1537.

The influence of the Roman Academy was very great, not only in Italy but also on the other side of the Alps as we shall see presently. Barthold says that at all seats of learning such societies were formed, modelled after the Roman Academy; that

nearly every palace was changed into an academy of science and a temple of the Muses, especially in Mantua and Milan; that all these academies at one time or another, besides classical antiquity, gave attention to the mother-tongue; that Florence, Venice and Bologna rivalled in the cultivation of "belles lettres." This last is especially significant in connection with the German "Sprachgesellaschaften," to be treated later. The number of Italian academies, both scientific and literary, is variously estimated at from a few hundred to 700. In some of them experimental science was cultivated: such were the *Academia Sacretorum Naturae*, founded in Naples in 1560 under the presidency of Baptista Porta; *The Lincei* in Rome by Federigo Cesi which issued valuable publications and of which Porta, Galileo and Colonna were members; and *Academia del Cimento* founded in Florence in 1657 under the advice of Viviani, one of the greatest geometers of Europe, and of which Toricelli, the inventor of the barometer, was a member.

The Neapolitan Academy. Another famous academy is the one at Naples under Alfonso I, next to the three Medici the most noteworthy person of the Renaissance. He collected around him a number of scholars and devoted large sums of money to science; it is said that he spent 20,000 ducats annually for this purpose. The most famous of this group of scholars was Antonio Beccadelli, or sometimes called *Palermo Antonius Panormita* (born 1394 or 95), who first made humanism at home in Naples. He had met the most famous humanists at the court of Florence, such as Poggio, Niccoli, Cosmos de Medici, Leon Battista Alberti, and he took great pains always to keep up good relations with the Florentine circle. He was at the head of the Neapolitan Academy and Alfonso furnished him lavishly. He presented him with the magnificent palace Zisa with its orange gardens and fields; a villa in Portici; a palace in Naples; and when he went to a princely wedding at Venice he went with twenty servants and received 850 ducats for his expenses.

Gothein says, his academy, in which he preferred to inspire rather than work himself, was held together not by its relations to the royal house, not by a kind of public recognition, not even by the intellectual problems which it had set itself, but rather by a personal friendship the intensity of which was increased by the feeling that they were a society of a higher culture in an essentially different world. Though Panormita had made it a law of the academy that a grammatical essay had to be read at every session, the grammarians, who were the teachers of the young, were the enemies of the academy. One can readily understand this when one remembers that it was not "Gelehrsamkeit" that was carried on by this group of scholars,

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but above all "die Wiederbelebung des antiken Lebensinhalts" as Gothein puts it. Personal friendship was a more important bond of union than common studies. As with the Florentine Academy and the Roman Academy under Pope Leo X, the fusion of friendly sociability with literary debate was a necessary of life.

Valla was for a time a member of this circle. Luther was a student of Valla's works. Gothein says, it was Valla who gave Luther the conviction that the claims of the Papal power rested on a fictitious basis, that the real basis of the church cannot hold its own against criticism.

The Crusca. One of the most famous academies of Italy, and one which has had a greater direct influence on the development of similar societies north of the Alps, and one of whose history we know more than of any other, is the *Accademia della Crusca.* It was founded at Florence, in 1582, by Cosmos de Medici by giving an official form to a private academy which already existed. Its original membership was five, but the same year a sixth member joined named Lionardo Salviati; it is he who drew up the plan for an Italian dictionary, a work, Reumont says, which alone would have made him famous. Though its members were mostly Tuscans, yet it had foreign members, and during the 17th century a great number of the most brilliant men of Italy belonged to the society, and Reumont says, its activity corresponded to the brilliancy of the names which adorned it. As early as 1586 Virginio Orsini, Duke of Bracciano, the most brilliant nobleman of Italy, was a member. Reumont says in the 264 years of its existence it had 976 members, native and foreign. Each member had an academy name, a "Sinnspruch," and a "Sinnbild." Many of the nobility that belonged supplied the academy with funds. The house of the Medici stood by the academy for 200 years and sixteen of the princes or this house were members. Amongst its membership were one Pope, Clemens XII, and many cardinals. From the time of its beginning till 1857, seventy foreigners belonged, as follows: Thirty-eight French, sixteen German, six English, four Scandinavian, two Polish, two Dutch, one Greek and one Spanish. Many foreigners were admitted complimentary, but in most cases the appointment was due to service rendered to science and to literature. Some foreigners had the twofold distinction of representing their government at the Tuscan court and of being a member of the Crusca.

The aim of the academy was to purify the mother-tongue, or, as its name indicates, to separate the flour from the bran. In thus establishing a literary language and in limiting the dialects to their proper spheres it did a great thing, such as,

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Reumont says, is rarely attempted and still more rarely prosecuted with equal skill and equal success. To attain their end they thought it best to work out a dictionary, and so we find as early as March 6, 1591, the plan of a dictionary discussed. Not before the spring of 1597, however, were definite rules adopted as to the plan as a whole, definitions, etymology, orthography, arrangement of the subject matter, the citing of modern authorities, etc. Four members were given the direction of the whole work, but it was soon found that the task was entirely too much for them and fifteen more were added, making the number nineteen.

That these nineteen men lost no time in getting to work is shown by the fact that in May, 1606, the first revision of the dictionary was completed; that in October, 1610, the secretary of the academy, Bastiano de Rossi, was instructed to arrange for the printing of the complete work in Venice; and that in 1612 the *Vocabolario degli Accademici della Crusca* appeared in a folio volume. Just thirty years had elapsed since the founding of the academy. Eleven years later a second edition was issued with some additions and corrections, and forty years later, 1681, the third edition appeared in three folio volumes. In this edition the range of authors cited and compared was widened and etymology received more extensive attention.

The Crusca also issued a corrected edition of the Divine Comedy in 1595. They felt the need of this because it contained the better part of the language and had been ruined by commentators. They took as a basis the Aldine text of 1502, but compared it with various other manuscripts and added other versions in the margin. This edition became the model for the majority of the later editions.

The greatest work which the academy carried out in the first half of the 18th century, and, Reumont says, the greatest work of its kind which any learned society has ever carried out, is the fourth edition of the dictionary, which appeared 1729-1738 in six folio volumes. Reumont says that up to the present time this fourth edition has been the basis of all lexical work in Italy. It was reprinted with more or less changes and additions in Venice in 1741 and 1763, in Naples in 1746, in Verona in 1806, and in Florence in 1833. It has met with much criticism, but the academy's service to the language, Reumont says, even envy and prejudice cannot deny.

The foreign members, it is true, could not help much toward a dictionary, but they, each in his way, spread the knowledge of, as well as appreciation for, the Italian literature by means of translations or annotated editions of the great Italian masterpieces. Not only that: these foreigners, above all, carried across the Alps that spirit of brotherhood, and that passion for

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co-operative investigation of truth outside of the narrow bounds of scholasticism, which was destined to yield such fruitful results in future years. Among its foreign members were not only poets and literary men, but princes and philosophers, historians, archæologists and natural scientists.

Furthermore, this academy became the model directly of at least two other famous societies, of the Old French Academy, in 1635, and of the "Fruchtbringende Gesellschaft," founded by Ludwig von Anhalt in 1617, both of which societies gave their attention largely toward the development and purification of the mother tongue.

Academies North of the Alps.

Academies of Conrad Celtis. The academies of Italy, however, made themselves felt in northern Europe long before the "Fruchtbringende Gesellschaft" was formed. Numerous European scholars in travelling through Italy became acquainted with, and often became members of, the academies. Among these wandering scholars, and one of the most famous of them, was Konrad Meissel, or, as he later called himself, *Conrad Celtis Protucuis*, who was a poet of some note, being crowned by Emperor Frederic III in 1487.

Celtis (1459-1508) had a great desire for knowledge. He fled from home and went to Cologne to study, but soon tired of scholasticism there, he travelled far and wide, and in 1484 came to Heidelberg. This was at the time a great seat of humanism and here he matriculated under the academic name of *Conrad Celtis Protucuis*. He soon so won the respect and love of Dalberg, Agricola, and Plennigen that they admitted him to their "Zwanglose Gesellschaft," a society modelled after the Roman Academy. After he had visited Erfurt, Rostock, and Leipzig, he went to Italy in 1486 and heard at Padua, Ferrara, Bologna, Florence, and Rome the most celebrated humanists. Having sat at the feet of Pomponius Laetus, and having been urged by him to found similar societies in Germany, he returned by way of Venice and founded in Germany academies for classical studies, modelled after the Italian. It is said that he founded eight or nine such academies in different parts of Germany of which the one at Vienna and the one on the Rhine were the most noted. Some of his academies, it is true, may hardly have outlived the presence of the poet, yet with some the influence of classical antiquity remained longer.

The great *Sodalitas Rhenana* or *Celtica* was founded between 1487 and 1491; it was a humanistic society which united the noblest minds in the valley of the Rhine. Little is known of the constitution of this society, but it is known that it had one law, namely, that all manuscripts published by the society

were to be examined by the members. This society had a letter of protection from the emperor copyrighting its publications, and it regarded itself as a kind of overseer over all the other societies of the life of which we know little.

The society at Vienna was quite comprehensive and successful. It was the centre of humanism in the valley of the Danube, for Germans, Bohemians, and Moravians. Here classical forms of poetry were successfully imitated. The members presented each other with loving cups accompanied by odes full of inexhaustible praise for genius. Every work of the muses here, however, was in antique form; the very universality of the society prevented it from doing anything for the vernacular. One of the plays of Celtis, entitled *Ludus Dianae*, was played before the emperor at Linz by twenty members, four of whom were crowned with laurel, and all members present were served from golden vessels.

The society of Wittenberg was the one where the celebrated Bohemian Bohuslav Lobkowitz von Hassenstein "had his love for the humanities aroused which he carried with such beautiful success to his countrymen."

When Conrad Celtis, "burned out by the fire of his soul and his senses," died Feb. 3, 1508, at Vienna, at the age of 49, the academies continued to live for several years, but they soon disappeared in the storms of the reformation. These old academies, however, had not lived in vain in so far as they "strove against hide bound scholasticism in church and school and made it possible that the Latin Muse could, in the 16th century, be represented by the gifted Hessian, Coban."

Barthold says, that though antiquity was the centre around which these societies moved, and though they held close to the purity and elegance of classical models, yet they drew into their circle not only Florentine Platonism but also mathematics, astronomy (astrology), and music. He says this academy investigated the remains of Roman antiquity in Germany and studied inscriptions and monuments and thus opened the way for German history and its sources. Celtis rendered great service to history by finding the so-called *Tabula Peutingeriana* and by discovering in an unnamed Benedictine cloister the handwriting of Hrosvita, the oldest German poetess, which he published in 1501. Keller says that though these societies devoted themselves to poetry, to the publication of ancient classics, and to the cultivation of the vernacular, even calling themselves poets, yet it needs be noted that some of the members were not poets and that there were very few poets who did not at the same time devote themselves to astrology, cosmography, geography, alchemy, etc., and that among these "poets" we find prominent tradesmen such as printers, paint-

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ers, sculptors and others. Moreover, just as Paul II felt that there was a connection between the Roman Academy and the Bohemian heretics, so the German clergy accused these "poets" of heresy.

These academies did really nothing for the mother tongue though they translated many classics and meant to give the vernacular the same flexibility and richness they so much admired in the ancient languages. To bring about a regeneration of the German language by means of classical models failed. Barthold says German poetry became silent with the death of the Frankish warrior of freedom, Ulrich von Hutten, who was crowned at Augsburg in 1517. The succession of Charles V to the German throne was a national calamity. Luther, it is true, secured the dominance of German in the Protestant church, in popular expression and in church poetry, but scientific German did not profit thereby and the poetic genius of the people was threatened with extinction during the fierce battles for freedom of conscience. At the time when the Italian Muse, cultivated by numberless societies of linguists and poets, reached its apex with Tasso, in Germany the period of barbarism in language set in. And during this very period of darkness in German history and German language, the "Fruchtbringende Gesellschaft" was born; to this society we shall give our attention in a later chapter.

The Bohemian Brothers. Humanism, however, was carried on not only in secular academies but also by religious organizations, such as the Bohemian Brothers and Waldensians. These were of course sects, "heretics," which stood outside of the Catholic church and were severely persecuted by it. They were probably the representatives of that independent spirit which refused to bend the neck to the yoke which the Catholic church ever since the early Christian centuries tried to force upon all religions within the bounds of the Roman Empire.

J. von Döllinger holds that the sects of the middle ages are connected by a series of members with the sects of the first and second Christian centuries, and believes that at the beginning of this series of development are those sects which are commonly called *gnostic.* He says gnosticism had spread all over the Roman Empire, and even beyond its boundaries, in the middle of the second century.

Keller says that the inner relations of all the sects, from the early centuries to the middle ages, is so striking that one can only explain them by assuming a common origin of them all. He thinks that the most important doctrines of these sects began their development with the early church fathers, and from the east gradually spread northwestward over Asia Minor, Bulgaria, Dalmatia, Upper Italy, Southern France, thence to Ger-

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many, Bohemia, Poland and England. During all these centuries their convictions had to maintain themselves against persecution, and that often of the severest kind. It was common during those times for men to have two religions, the one public—per force, the other the one they believed and which they practiced in private. This is an important fact to bear in mind when one studies the organization of these "heretical" churches.

These old evangelical churches had three degrees:—*Socii*, *Fratres* and *Perfecti*. It was the *Perfecti* who elected the brethren and who supervised the whole temple. The Fratres formed a kind of an academy. Keller thinks that undoubtedly many churches consisted of only Socii who did not know that they formed a part of a ring of "heretics." Often these churches, especially when religious storms were raging, existed only as literary societies, or as inner circles of legalized organizations such as trade guilds, building corporations, laboratories of princes, and printing offices. In this way they could follow their own ideals unmolested. Thus we find not only a close relation between the Bohemian Brothers and the academies, but in many cases in Bohemia they were one and the same thing. What this means to education we shall see later when we note the relation of Comenius to the academies.

Among the Bohemian Brothers, in the 15th to the 17th centuries, there were many so-called literary societies which had to withdraw into secrecy during periods of religious storms. The membership was composed of men of all classes and all professions, often they even had members of all confessions. Some of these societies had their own houses in which they had their own libraries, their own entertainment rooms and sometimes their own school. Like the Italian academies, they cultivated music and poetry, mathematics and natural science, as well as the vernacular. They aimed also to enhance the glory of God, virtue and good morals, and to foster and disseminate peace and good will among mankind.

Though we know nothing of their rules and regulations, we do know that in the history of Bohemian and Moravian humanism these societies played a great rôle. Barthold says in substance: "No slavic race had had such a golden period of spiritual culture, of wealth and of splendors as the Bohemians had from the time the Hussite storms had subsided till the time of the second Rudolph. Bohemians were among the rivals that competed for the prizes in Celtis' academy; some of them ranked among the best, especially was this true of Nicholaus Troylo, professor at Prague, who in 1627 became a member of the 'Fruchtbringende Gesellschaft.' Printing flourished among them, and we find the most select libraries in Bo-

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hemian cities in the palaces of the cultured rich. In the 16th century, while Germany was still Latin, the Bohemians began to write their own history in their mother tongue, and though the Catholic clergy held to Latin, the nobles of both confessions promulgated national works in the Czech tongue."

After the defeat of the Bohemians all this changed; the Protestants were driven out of the country, and even the Catholics who had belonged to these societies were placed under close surveillance. The societies were by force changed to church fraternities, and in place of the "senior" a priest was placed at the head. In their houses church services were held and masses were read, and the members had to participate in the choirs at processions and church festivals. During the very time in which these literary societies were destroyed in Bohemia and Moravia we meet for the first time the activity of the "poets" and their "Sprachgesellschaften" in the Empire and especially so in Silesia. Martin Opitz, the personal friend of Comenius, was their spritual leader and he and his friends made the dialect of their province the leading idiom of the age.

It is significant here to note the relations of the Bohemian Brothers and the other old evangelical churches to the orient and to the Greek church on the one hand, and to the guilds and the academies of natural philosophers and alchemists (to be treated in a later chapter) on the other. This complex interrelationship may be the means by which we may finally bridge the chasm between the sixth and the 15th century.

Academies and Labor Guilds. From early Christian—may be from prechristian—times the labor organizations have been among the carriers and disseminators of science and liberal ideas. It is probable that as early as the time of the Pharaohs the technical knowledge of masonry and architecture was cultivated by the guilds and that the same is true of the weavers, just as the inner circles of guilds during the middle ages carried forward the "secrets" of their trade, one of which was geometry. It was in these inner circles—often called academy—that the master workmen were educated. Moreover, wherever the guilds flourished, the academies flourished also, and, Keller says, the words "Zunft" and "Hansa" (guild) were often used to also designate the academies, and that many of the members of the academies of natural philosophers were the sons of guild-brothers, all of which points to a close relationship between the two organizations. He furthermore says: "It is a noteworthy phenomena that all the great artists who carried forward the spiritual heritage of Dante and Petrarch grew up in the soil of the trades and that they found and recognized not only their social but also their spiritual home in the academies which in their turn rested upon the guilds. The

great ideas of antiquity, and especially the philosophy of Plato and the religious convictions of early Christianity formed the spiritual bond which united these trades and their academies into a long chain; and it was the ideas, convictions, and principles of these academies which inspired the poets and artists to their creations and opened new modes of thought and action to humanity."

Again, when in the last decades of the 13th and the first decades of the 14th century the church and the state were in bitter conflict and the Waldensians and other heretics were gaining adherents all over Europe, even among the nobility and the clergy, many members of the guilds, especially of the masons, adopted reform ideas and thus, beside carriers of technical science, these guilds became the propagators of brotherly-love and of toleration. It was also these guilds which offered to the heretical schools at the beginning of the reformation their best support and their best means to hide their existence. Döllinger says, that wherever the guilds were well represented heretical religious views were also well disseminated. The relation of the Bohemian Brothers to the academies of natural philosophers will be pointed out later.

Die Fruchtbringende Gesellschaft. It is a matter of history that as "heresy" was suppressed in one place or country it broke out in another. The alchemists, natural philosophers, and heretics had a secret means of communication all over Europe, and so we find that just as the Bohemian and Moravian societies are forced out of existence, across the border in Germany other societies with *other names* spring into life. In Germany, however, we meet with two kinds of societies, the so-called "Sprachgesellschaften" of the history of which something is known, and the societies of naturul philosophers of which we know very little. These two classes of societies were undoubtedly closely interrelated, since their organizations were very much alike and members of one were often also members of the other—in some instances there was probably very little difference in purpose and in aim.

By far the most prominent of the "Sprachgesellschaften" is the "Fruchtbringende," sometimes called "Der Palmbaum," founded by Ludwig von Anhalt in 1617. It has already been pointed out that it was an imitation of the *Crusca* in Florence which was chiefly a language society and of which Ludwig was a member. The aim of the society was set forth by Ludwig as follows: *Der Zweck ist allein auf die Deutsche Sprache und auf löbliche Tugenden . . . . . gerichtet.* In the regulations of the society, however, conduct is placed first and German second. Though one can see that for patriotic reasons these men should strive for a better development of the mother tongue, yet it is

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a fact that none of the eight founders were literary men and many of its later members were not; neither could the foreign members, many of whom were Bohemians and Austrians, be of much service toward the development of the German language. The bond that held them together was probably a sameness of philosophical and religious conviction. Religion was not a bar to membership; though the majority of the members were Protestants, yet we find some Catholics among them.

At first the society gave its chief literary attention to translations. Translations had been made heretofore, it is true, but then chief emphasis was laid on context, now more attention was given to form. Later, two grammars of the German language were produced by members of the society, one by Schottel and one by Gueinzius. The latter's book was published in 1641 and was officially recognized by the society as the German grammar, though in some places Schottel's work was received with favor.

When one looks at a page of German of this period one can readily understand why patriotic Germans should feel the need of cultivating the vernacular. It was a mixture of German dialect, Latin, French and what not. Even the peasant in his conversation would feel himself on a higher plane of culture if he could patch in here and there a Latin or French word. Martin Opitz (1639) complains that everybody who wishes to appear cultured uses a few foreign words on every possible occasion. Latin had indeed rooted so firmly that Opitz suggests that in reforming the German the foreign endings of proper names be retained in order not to offend too severely.

The "Palmbaum" was a secret society; it kept its activity so secret that thirty years elapsed before traces of its constitution, symbolism, and membership became faintly known to the public. When, in 1673, the society was on the verge of dissolution its membership became known, and the world was astonished to find among the 789 members not only citizens and scholars but many powerful German princes. Among the foreigners we find King Charles Gustave of Sweden, the Great Elector of Brandenburg, and the great chancellor Oxenstierna; among scholars we find Harsdörfer, Bernegger, Opitz, Dornau and many others all of whom were pupils, friends, or admirers of Hugo Grotius, Galileo and Campanella.

As to the influence of the "Fruchtbringende Gesellschaft" opinions differ. Some think it was of little importance. Yet this society was the first to bring together a number of prominent men opposed to the "Sprachmengerei" in Germany, and it cultivated a feeling of patriotism during the thirty years' war when patriotism was at very low ebb. It produced a com-

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prehensive German grammar, did much for orthography and versification, and took steps toward the compilation of a German dictionary,[1] but its great service was the purification of the German language. Within the society the principle of equal rights was recognized. When, 1647, it was suggested that only men of noble birth should be admitted to the inner ring, Ludwig objected and replied that scholars are noblemen. Furthermore, woman's equality with man was defended here. The work of the society was so well recognized that it was quite an advertisement for a book to have on its title page "Member of the Fruitful Society."

There were other societies for the purification of the German language, mostly imitations of the "Palmbaum," in which the tendency to go to extremes was often very strong. The "Palmbaum," was characterized by its moderation; its members constantly advised to keep foreign words that had become Germanized. Schultze says, "We to-day, in the matter of purifying the language, stand on the shoulder of the "Fruchtbringenden," we carry forward what they began and would indeed have much more to do had those men not so well prepared the way." Barthold says, "Through the efforts of this forgotten society our classical poets found a purified language which naturally adapted itself to poetic thoughts . . . . . such faithful sentinels of the language as Morhof, Leibniz, and Gottsched took courage when they thought of these never to be forgotten early champions." And we to-day agree with him when he says, if a language accepts complacently foreign elements, its deepest fountains dry up and not even the gods can bring back its original strength.

At the beginning of the 18th century attempts were made to found language societies on the model of those of the preceding century, and later we have as *scientific* continuations of the earlier "Sprachgesellschaften" the present German societies of Leipzig, Göttingen, Helmslädt, Jena, and Greifswald. About the time this society was organized Ratke, the man who first introduced German into the schools and into science, at the call of Ludwig, organized a school at Köthen, and Krohmeyer drew up the famous school ordinance for Sachse-Weimer which demanded that during the first three school years the main stress should be laid on the German—all this almost seventy years before Thomasius gave his first German lecture in the university.

The following are language societies modelled after the

[1] Ludwig bargained with Schottel for a German dictionary, but he did not publish it though he had collected much material. In 1671 the London Royal Society sent word to the "Fruchtbringende" that they expected a dictionary from them.

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"Fruchtbringende:" (1) "Die Aufrichtige Gesellschaft von der Tannen," founded in 1633. (2) "Die Deutsch-Gesinnte Genossenschaft und die Neun-Stündige Hänsesschaft," founded by Zesen 1643 or 1644 in Hamburg. (3) "Die Pegnitz-Hirten Gesellschaft," founded at Nürnberg by Harsdörfer in 1642 or 1644. (4) "Der Elbische Schwanen Orden," founded by Rist in 1656.

We meet here and there with the names of several other language societies, but whether they were only planned or whether they really existed, is not known. Such were: "Der Belorbeerte Tauben Orden." "Die Teutschliebende Gesellschaft zu Regensburg." "Der Leopolden-Orden." "Die Görlitzische Poetische Gesellschaft."

Of all the language societies the "Fruchtbringende" was the strongest in membership, both as to number and to quality. It had more than three times as many members as any one of the others. It was the most productive, and none of the others practiced such wholesome moderation in their work of purification.

Academies of Natural Philosophers. Keller thinks that the real nature and influence of the "Sprachgesellschaften" has not yet been properly understood. He says, it is true, a number of modern investigators admit that the turning point in German literary history, connected with the name of Martin Opitz, could not have occurred so rapidly and so thoroughly without the energetic help of the "Fruchtbringende Gesellschaft," but that these same investigators fail to see that this society had a larger aim than a renewal of the national language and literature, that it rather (vielmehr) offered refuge and support to all those men who worked at the reform of scientific as well as spiritual life. He says the development of the mother tongue, thoroughly as it was in harmony with the general principles of the academy, for the initiated it was only the cloak which shielded their highest aims from the eyes of dangerous opponents. All recent investigators, he says, have been misled by taking the shell for the kernel. During the stormy years of its existence it was desirable to avoid all suspicion of politics and church politics and to adopt as a bond of union a goal that was practical and attainable. He would place them practically in a category with the societies of natural philosophers.

It is true, he says, that the members that were most active since 1622 were dominated by linguistic and literary interests, yet in the admission of new members greater stress was laid on likeness of sentiment and endeavor than on the German language. It is significant here that, as has been said, none of the eight founders were active, neither in the science of language nor in literature. Keller thinks it is also significant to

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note that these academies, which really had had already a rather long history in Germany, began to develop more extensively during the very time when the "Gesinnungsgenossen" of Ludwig von Anhalt had gained a series of great and important political and religious successes; that in England their development was connected with the rise of Cromwell only to take on a different development after the restoration; and that in Germany after the victories of the counter reformation, Ludwig's academy directed its activity into other and more harmless channels.

Again, in 1647, Karl Gustaf von Hilles issued a pamphlet in defense and praise of the "Palmbaum" in which he said that within the society there were "secret things" which were known only to those who had the privilege to enter the castle at Köthen.[1] Keller thinks this is inexplicable if language and grammar were the sole aim of the society.

It is interesting to note here that only two preachers belonged to the society. J. V. Andreae, and Joh. Rist, both of whom got into trouble with the church because they were considered "Schwärmer" and fanatics. The latter belonged to the natural philosophers; in his house were a universal cabinet, distilling, and also mathematical apparatus.

Harnack does not agree with Keller that the mother tongue was only the cloak to hide the real aims of the academies from their enemies. He says, the vernacular and the new science went hand in hand; the spirit of the age expressed itself in natural science, mathematics, educational doctrine, and the vernacular. He would not deny that these societies stood for more than a cultivation of the mother tongue, but believes that the latter is an essential part of their activity. This view of Harnack seems to be sound. Their intense interest in humanity caused these men to develop vigorously the mother tongue, for it was only through the vernacular that they could reach the minds and hearts of the multitude.

Besides these so-called "Sprachgesellschaften" there were numerous other societies of natural philosophers of the existence of which we have only the merest traces. Their secrecy does not surprise us when we know that societies with such an innocent name as "Language Society" found it necessary, for fear of persecution, to keep their activity from the outside world. It was the alchymists and natural philosophers which were especially suspected by the church; they were suspected of belonging to the "Rosenkreuzer," an imaginary society supposedly of the greatest danger to the church, but which, in

[1] The society first met at Weimar, but later at Köthen. It also had local organizations at Brieg, Weimar and other places.

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fact, never existed. This suspicion of the church caused the secrecy of these societies to be so close that we know little else about them than that their inner workings were like that of the "Sprachgesellschaften" and other similar societies, that alchemy was a kind of side issue, that philosophical interests were always in the foreground, that they had three degrees and that only those who were considered "safe" were admitted to the highest degree or "inner circle."

These natural philosophers of the 17th century had had their predecessors. Through a long line of persecuted seekers after truth they had learned, had not their personal experience taught them, that no man is a prophet in his own country, and that to carry forward a great idea in the face of powerful and bigoted opposition it takes a firmly organized society. Alchemy itself was not new. Practical chemistry was known to the Egyptians of old. Through the Arabians it passed from the east to Spain, and from there it spread all over Europe. Emperors and popes issued edicts and bulls against it but without avail. In the 13th century the great authorities in natural science, such as Albertus Magnus, Thomas Aquinas, Roger Bacon were in sympathy with it, and during the 15th and 16th centuries numerous rulers and princes on the continent and in England employed wandering alchemists. We can readily see the reason for this when we remember that some of the best chemists of the times, such as Basilius Valentinus, Paracelsus, Johann Baptist van Helmont, were found among the so-called alchemists, many of whom were earnest seekers after truth, and had no sympathy with cranks and charlatans, and objected to the names "alchemist" and "Rosenkreuzer" given them by their opponents.

From the correspondence of the members as well as from the attacks of their enemies we learn that quite a number of societies of alchemists and natural philosophers existed during the 17th century. Such societies were found at Vienna, Helmstädt, Lüneburg, Hamburg, Bremen, Erfurt, Danzig, Rostock, Nürnberg, Mantua, Venice, London, Amsterdam, and The Hague. In The Hague they even had a palace in which they held their meetings. It is known that in 1676 Johann Wulfert, a friend of Leibniz and later a member of the Berlin Academy, travelled through Germany to visit these societies.

The society at Rostock was founded by Joachim Jungius (1587-1657). Jungius was a man of great talent; he was naturalist, mathematician, and physician, and has been called the Bacon of Germany. He was a close friend of Leibniz and of Comenius and was a co-worker with Ratichus at his "Lehrkunst" in 1612, and even at that time he planned the

founding of an "Collegium." In 1618 he studied at Padua, a centre for science, medicine and Platonic philosophy. In 1619 he returned to Germany, spent several years at Rostock, where several friends of Valentine Andreae lived at the time, and there, in 1622, founded an academy quite independent of the university, on the model of the Italian academies and called it *Societas Ereunetica* or *Zetetica*, or *Collegium Philosophicum*.[1] The aim of this society was, the investigation of truth by reason and experience; to strive to free the arts and the sciences from sophistry, to bring them back to demonstrable certainty, disseminate them by instruction, and increase them by happy discoveries. It was a secret society, but all transactions which were not especially designated to be kept secret, could be made public. Jungius, as did the members of other societies, kept close friendly relations with the artists and tradesmen and had them inform him on scientific questions which, from the nature of their trade, they understood better. In 1625, in the turmoil of the thirty years' war, this society ceased to exist.

From his own day to ours, Jungius has been ranked amongst the foremost thinkers. Leibniz in his later years planned to issue a collection of the writings of Galileo, Campanella, Pascal, and Jungius, and said he considered Jungius second to none of the others. Goethe and Alexander von Humboldt held similar views, and Harnack says he is in more than one sense a Leibniz before Leibniz.

Another society of special interest to us is the one at Nürnberg founded in 1664. In 1667 Leibniz, at the age of 21, became a member and soon was made its secretary. This society had prominent men as members and carried on an extensive correspondence with similar societies in upper Italy, Germany, England, and Holland. The impressions which Leibniz received here, according to his own confession, remained with him through life.

One cannot leave this period without giving at least a brief account of Johann Valentine Andreae and his relations with, and influence upon, Comenius. Andreae's influence upon the men of his time can hardly be overestimated. He carried on correspondence with a very great number of men. With one of these men, who even did not stand very close to him, Brügel says, he exchanged in all 500 letters. "In order that life do not flit away without spice, I use the salt of friendship," he often said. He entered the University of Tübingen to study theology but early interested himself in natural science and mathe-

[1] He felt the need of a society for he said: "Wenn ich hätte allein sein sollen, so hätte ich keine Feder gegen die Schulmeinungen geführt." (Guhrauer.)

matics. Later he went to Switzerland, France, and Italy and here began his estrangement from the prevailing orthodoxy. He associated much with tradesmen and mechanics and was perhaps well acquainted with the religious conceptions that prevailed at the time among the labor guilds. In 1614 he returned to Würtemberg, wrote books which were widely circulated in Europe and were known to all the natural philosophers. He was a strenuous apostle of toleration and did a great deal to bring about religious peace. Though his opponents called him "astrologer," "Schwärmer," "sectarian," "fanatic," Spencer once exclaimed: "Could I, for the good of the church, awaken some one from the dead it would be J. V. Andreae." At the end of the 18th century Herder studied his writings, and later Schleirmacher did so, and it was a pupil of the latter, P. W. Hossbach, who published in 1819 the first monograph on the life of Andreae.

In Andreae's "Christenstadt" he advocates that men of different convictions should be allowed to live together, and to work for the same goal unmolested, and at the head there should be an academy or "Collegium" of scholars who were to devote their time to science. This idea was expressed before Bacon's "Novo Atlantis" was published.

Andreae was a deeply religious man but uncompromisingly opposed to the dogmatism and scholasticism of the church. He wished to overthrow the religious and the literary idols and place true Christianity in their place. And when, like Jungius, he found that individual efforts were not sufficient to carry out his ideas, he founded a *Societas Christiana*, of the activity of which we know little or nothing. He says in his biography that his burning love for the cause of Christianity had met on all sides with hate whenever he tried to advance it in a public manner, therefore he had seen the necessity of reaching his goal in a roundabout way.

Ever since 1617 Comenius studied the writings of Andreae with enthusiasm; it was the first step toward making him the friend and companion of the leaders of the academies. The more extended his correspondence became with the natural philosophers, and the more he became engrossed in mathematics and natural philosophy—which was about 1627—the more active he became in the reform movements of the 17th century. In 1628 Comenius asked Andreae to admit him among his pupils and sons; Andreae accepted him and soon after sent him the laws of the "*Societas Christiana*"—but they have not yet been found. In 1629 Comenius asked for the origin and history of the society. Andreae grants his wish and replies in a long letter in which he says his aim had been to break the religious and literary idols and put Christ in their place; he expressed

his great disappointment at his own failure and exhorts Comenius to carry forward the good cause which he says permits as co-workers all the peoples of the earth, but especially those Christians whose bond of union is exile. The history has not been found. Comenius himself calls him the learned and excellent Andreae and says, he, above all, deserves to be named among the men who worked at the improvement of the teaching method. He says Andreae gave the torch into his hand and cheered him on to risk something for the cause. How well he carried the torch the world knows.

H. F. von Criegern says that Comenius got his fundamental didactic and pansophic ideas from Andreae whom he often quotes literally, especially in his Labyrinth of the World. And Brügel says that Andreae laid the foundation upon which Comenius erected the admirable structure of his didactic. Comenius had also close relations with Hartlieb, Jungius, Harsdörfer, Dilherr, Zesen, Leibniz, Pömer, Wolzogen, Hübner and others. These men were the leading spirits of the age and the leaders of the academies of natural philosophers.

We have further evidence that Comenius stood close to the academies of natural philosophers. It is well known that members of the academies often used their symbol on their writings in order to stamp them as their own. Keller says Comenius used several such symbols which had been property of the academies since ancient times, one of them being the symbol which appears on the cover page of the "Monatshefte der Comenius Gesellschaft." Keller thinks he certainly would not have used these symbols without the consent of the academies. Moreover, the pansophical writings of Comenius were nowhere accepted with such approval as with the natural philosophers—not even with his own brethren. Comenius also knew something of the history of academies. He praised the *Accademia della Crusca* and the *Fruchtbringende Gesellschaft* and expressed the wish that among all peoples such academies might be founded. He realized that the academies working each for itself could easily be made the plaything of the powers that be, and that their influence would be largely local, and therefore he suggests in his "Via Lucis" that an attempt be made to form under a new name a higher organization of all the academies of all countries. He thought the time had come to unite "all sums with the sum of sums" and to found a *Collegium Catholicum* among the scholars of the earth. This *Collegium*, from the book of nature, from Holy Writ, and from the innate concepts of the members was to build up and improve pansophia; it was to cultivate a universal as well as the folk-languages; was to build and supervise schools in all countries, and was to have its beginning and centre in London under Crom-

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well. This idea of Comenius was kept alive in London by Hartlieb and may have contributed to the founding of the "London Society."

When one compares the activities and constitutions, the world-conceptions and the religious principles of the academies of natural philosophers of the 17th century with those of the Bohemian Brothers and the Waldensians, one is immediately struck with the similarity between them. The following points of similarity may be noted:

1. The *socii*, *fratres*, and *perfecti* of the Bohemian Brothers correspond closely to the three degrees of the academies; and both had a picture language, secret recognition signs, as well as brother-names, all known only to the initiated.

2. The academies laid great emphasis on the mother tongue; and Gindley says no religious body has ever worked so emphatically and so systematically for the vernacular and for the establishment of a folk-literature as these Brothers.

3. While in the ruling church there was a great chasm between the rulers and the ruled, among the academies as well as with the Brothers, there was more democracy and all were encouraged to partake of the general culture and of all knowledge that was worth knowing.

4. Both believed in and worked for freedom of conscience; they refrained from forcing a religion upon others as much as they refused to have one forced upon themselves.

5. Though free from all confessional narrowness, and accused of heresy by the dominant church, both the Brothers and the Philosophers were mostly men filled with the deepest piety.

6. They preferred to emphasize the goodness of every soul and so brought sympathy and kindness into education, whereas the austere Luthern idea of the natural depravity of every soul led to unnecessary cruelty.

7. Both had a great love for nature; it is true, the Brothers did not accomplish much in this direction, but their very attitude was of great importance as compared with the attitude which considered all external nature as the work of the devil.

8. Both persistently advocated peace and good will to all mankind and especially were they anxious to see religious peace upon the earth.

9. The idea of the reformation of the whole world, advanced by the natural philosophers of the 17th century, is shown by Gindley to have been held by the Brothers as early as the 15th.

10. In the inner circles of both not only religion but also science was cultivated.

The men that belonged to these societies of natural philosophers were practical men. They held that science must mean something for life, an idea which we do well to lay to heart

to-day. Leibniz states their attitude well when he says, action must accompany words, life must profit by science. And in another place he says: "As often as I learn something new I immediately consider whether something for life cannot be gotten out of it." A science which had to remain unknown to the people on account of the very language in which it was written, could not be the aim of these philosophers and hence they made a fight for the vernacular, a fight which arrayed the church and most of the learned institutions against them.

The influence of these academies, whose aim was not only to increase the stock of human knowledge but also to make all knowledge fruitful for the education of man, can hardly be overestimated. What the Italian academies have done for the Italian language has been pointed out in an earlier chapter; in a similar manner the German academies were for a time an effective bulwark against the degeneration of the German language and literature. Keller says it is in these Platonic societies and not in the universities that we must look for the birthplace of the newer German literature, and he is certainly right when he says that that fact alone would make them a noteworthy historical phenomenon.

A number of the early Italian academies had devoted themselves to natural science, and these German academies, which were often called Socratic societies, carried forward that heritage. They held that to study the works of God would do more for the glorification of His holy name than the scholastic disputations which resounded in the halls of the universities. These philosophers were seekers after truth wherever they found it and often called themselves Platonists or Neo-Platonists and called their science *Pansophia* or Natural Philosophy. Schuster says: "It is to these natural philosophers, notwithstanding their shortcomings, that we owe the great change which separates the modern world-conception from that of the middle ages." And Keller is undoubtedly right when he says, that whatever may have become of these academies (as we know, some of them became social clubs, some literary societies, etc.) it is certain that at various periods of their existence they were for many prominent men, and not least so for Comenius, places of refuge of free thought, centres of high mental and moral endeavor, and the carriers and disseminators of great ideas of reform.

When one wishes fully to realize the influence of these societies one must compare their activity with the activity of the universities. The latter, as is well known, were drying up in arid scholasticism; they held aloof from the Platonists. Men of great originality could not live within their walls. The professors at the universities looked with contempt upon every-

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thing outside of Thomas Aquinas and other accepted authorities of the church. The universities were church schools, and when we remember that their attitude was the same as that of the church, we can in some manner realize what it meant to break a lance for authors like Galileo, Grotius, Andreae, Bacon and others, as the natural philosophers did.

Petrarch called the universities seats of conceited ignorance. Leibniz held that universities were not adapted to serve the progress of science, and it is a matter of history that none of the great reformers in philosophy and in science were connected with the universities nor did they try to be. Paulsen says: "At the end of the 17th century the German universities had reached the lowest level they had ever had as far as the public esteem in which they were held and the influence they had on the German people were concerned. Leibniz despised a university appointment and justly hoped to find at the courts a better understanding and better support for his comprehensive plans of improving the culture of the German people. His indefatigable activity to found academies is an expression of his hopelessness as to the possibility of carrying on scientific investigations in the old universities."

To-day conditions are different in Germany. The German university is a seat of scientific investigation because it offers the greatest freedom to the scholar—it is indeed one of the freest spots on the face of the earth. Therefore we find the German scholar to be at the same time an academic teacher; among them are the philosophers, Christian Wolff, Kant, Fichte, Schelling, Hegel, Schleiermacher; the philologists Heyne, F. A. Wolf, G. Hermann, Boeckh; the scientists and mathematicians Gauss, Liebig, Helmholtz, Kirchhoff, Weierstrass, Virchow, Hertz, Roentgen; the poets, Uhland, Haller, Schiller, Rückert, Gellert; the jurists, Pufendorf, Thomasius, Savigny, Feuerbach, Niebuhr, Treitschke, and many others in all these different fields.

The same is not true in England nor in France, where the youths are not taught by the greatest scholars. The universities in these countries are not the carriers of science, this work still belongs to the great scientific academies. In England the greatest scholars were not connected with the universities, or at least did their great work outside of them. We may mention the following: Bacon, Hobbes, Shaftesbury, Locke, Hume, Ricardo, Bentham, Gibbon, Macaulay, Carlyle, the two Mills, Grote, Spencer, Priestly, Davy, Wallaston, Young, Dalton, Faraday, Joule, Green, Boole, John and William Hunter, Jenner, Astley, Cooper, Bright, Darwin, and others.

Merz says, referring to the scientists: "Through situation

or constitution the English universities were unable to open a field of activity for these celebrated men," whose names are identified with the greatest works in experimental science. And Paulsen says some of these men would have been impossible in the universities.

Three Royal Societies. The great Royal societies of Europe are a development of these private academies described above. Two of them began as private societies at a time when the academies of natural philosophers still flourished, and a third, though founded later, had as its founders and chief promoters men who had belonged to, and received their training in, the earlier private academies. It is not the aim here to give a history and an evaluation of the Royal societies, for they have multiplied to such an extent, and their work has been so vast and so important that a special study is required for every branch of science. Nor is it the aim to go into the history of the numberless other academies and learned societies of Europe and America, of which there are hundreds in England alone which has over 600 such societies in all. Yet it comes within the sphere of this paper to point out briefly the relation that the earlier private academies had to the three earliest and three of the greatest of the Royal societies, namely the French, the British, and the German (Berlin).

The French. As early as 1629, says Pellison, some men living in Paris had difficulty in finding one another and therefore resolved to meet on a certain day of the week at the house of one of their number. They were young men, one only a boy of 15, nine in number, not very brilliant, but "all men of letters and of merit above the ordinary." At their meetings they discussed in free conversation various topics, such as the news of the day, affairs, belle lettres, and often the literary work of some member.

The members intended to keep their meetings secret, but in 1634 Richelieu heard about the society and politely asked these men whether they would not like to assemble regularly under public authority. Some of the members being intimately connected with the Cardinal's enemies, there was considerable discussion, but finally the opinion prevailed that what Richelieu wished he wished seriously, and so agreeable or no, they thanked him for his kindness and accepted his offer. The king, Louis XIII, soon issued his edict and after some delay parliament registered the letters of establishment July 10, 1637 and the *Academie Français*, the name adopted after some deliberation by the members in session, was a fact.

The aim of the academy, being modelled after the Crusca, was to render the language capable of the greatest eloquence by cleansing it of its impurities. They wished that the French

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heroes might be sung in as noble verse as the names of the heroes of old. To accomplish this aim the academy pledged itself in its statutes to make the following books: (1) An ample dictionary; (2) An exact grammar containing a section on the ornaments of language; (3) A Rhetoric; (4) A Poetic. Only the dictionary was completed.

Progress on their work was very slow. They began with the letter A and completed it in about 8½ months and then found that they had forgotten the word *Academie*. As the work progressed the speed slackened and it was not till 1694 that "The Dictionary of the French Academy" was published.

The academy of sciences in France was founded 1666. It began as a private society but was taken under the protection of the state by Colbert. The history of literature and of science in France cannot be written without the history of these two academies. Among its members we find most of the most brilliant French literateurs and scientists. Among them we find Corneille, Racine, Boileau, La Fontaine, Bossuet, Voltaire, Montesquieu, Buffon, Clairaut, d'Alembert, Huyghens, Mariotte, Mabillon, Rollin, Turgot, Lebrun, Mignard, Lesueur, Philippe de Champagne, Mansart, Soufflot, Chateaubriand, Victor Hugo, Lamartine, Alfred de Musset, Alfred de Vigny, Guizot, Thiers, Cousin, Monge, Berthollet, Lagrange, Laplace, Lavoissier, Fresnal, Ampère, Arago, Cuvier, Geoffroy Saint Hilaire, Cauchy, Chasles, Claude Bernard, Buffon, Jussieu, Rèamur.

The British. There were probably secret academies in England similar to those on the continent, the names of some of which are found in the correspondence of the natural philosophers; such were "Macaria," "Novo Atlantis," "Antilia," and "Utopia." It could hardly be otherwise, since in the early part of the 17th century many persecuted reformers, and especially Bohemian Brothers, fled to England for safety, and it was in London that Comenius published his "Via Lucis." Bruno is said to have gone to London to found an academy as early as 1583. The earliest society of which we have any definite record, however, is the *Academia Londinensis* founded in 1645.

According to Dr. John Wallis, one of the earliest members of this society, "several worthy persons residing in London who were inquisitive into natural and the new and experimental philosophy, agreed to meet weekly on a certain day, to discourse on such subjects." These meetings were suggested by Theodore Haak, a native of the Palatinate, and Samuel Hartlieb, of Elbing, at whose invitation Comenius had visited London, was an early member of the society.

Birch says: "Their business was, precluding affairs of state,

and questions of theology, to consider and discuss philosophical subjects, and whatever had any connection with them, as physic, anatomy, geometry, astronomy, navigation, statics, magnetism, chemistry, mechanics, and natural experiments, with the state of these studies, as then cultivated at home and abroad."

The rules adopted in 1660 provide for a weekly meeting; that no person shall be admitted without scrutiny except such as were of, or above, the rank of baron; that the number be 55; that 9 constitute a quorum for all business except elections when 21 are required; that no member be admitted on the same day he is proposed; that the officers consist of a president or director, a treasurer and a register, the first to be elected monthly, the other two yearly; that each member pay one shilling weekly to defray expenses.

In 1662 the academy was made The Royal Society and received a charter from the king. This society has largely determined the development of science in England, and its proceedings, published annually since 1665, is a monumental record of experimental science.

Berlin. It is admitted by every one that the Berlin society owes its origin largely to the untiring zeal of Leibniz, who held to the idea of founding academies with the persistency almost of an obsession. He once said that if he were pope he would parcel out scientific studies to the different orders of the church just as he would parcel out the works of mercy. As early as 1669 he drew up a plan for an academy. His idea was to found one central society with a number of branch societies all over Germany and societies for correspondence all over the world. In his plans, we know, he always tried to get some connection with China. This reminds one very much of the plans of Andreae and Comenius.

He had tried to found an academy in his home city, Hanover, but failed. After a visit to Paris, he however got new enthusiasm, and in 1676 he again worked for the establishment of an academy in Germany and urges correspondence to this effect with prominent scientists such as Weigel, Schwammerdam, Leewenhoeck, Tschirnhaus, and Gericke. In 1677 he planned a "Gesellschaft von Gottesfreunden" aimed against atheism and for the study of natural philosophy. In 1681 he planned a Magnetico-Mathematical Society which was to make observations all over Germany. In Frankfort he discussed with Hiob Ludolph the plan of a royal historical society. With the marriage of Sophia Charlotte of Hanover, a princess who had grown up under his influence, in 1684 to the elector prince Frederick of Brandenburg, Leibniz thought the time was propitious for the founding of an academy at Berlin. And to read

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his efforts, his failures and his delays, his hopes and his despairs is almost tragical. Whenever his efforts seemed to fail in Berlin he directed them elsewhere. In 1704-5 he and Tschirnhaus had all the papers ready for the king to sign for an academy at Dresden. In 1711-12 he had several personal conferences and exchanged many letters with the czar concerning an academy at St. Petersburg. In 1712-14 he was in Vienna trying to found an academy there. But all his efforts were for the time being in vain.

The "Stiftungsbrief" for the Berlin academy was issued as early as July 11, 1700, just as it had been drawn up by Leibniz. It outlines the field of work in very general terms, probably purposely so; it gives to the society three chief aims: "Das Evangelisch-Civilisatorische," "das Naturwissenschaftlich-Praktische," and "das Deutsch Nationale" as Harnack puts it. Leibniz was made president and was to receive 1,000 Thaler as salary and reimbursment for correspondence and travelling expenses, but he never received more than 600, and even that seemed to be given grudgingly. There were several great obstacles to be overcome which brought the society several times to the verge of ruin. First, there was no money; secondly, King Frederic had lost faith in Leibniz because there was jealous opposition to the latter at the court. And so we find that when after a long and tedious struggle the academy was inaugurated on Jan. 19, 1711, it became known that an honorary president had been appointed who was also director, and Leibniz was only ordinary president. Thus after all these years of unrequited toil Leibniz was practically set aside and others were to reap the fruits of his labor.

On Nov. 14, 1716, Leibniz died lonely and forlorn, suspected by the House of Brandenburg and neglected by the House of Hanover. All his great plans seemed to shatter. But, Harnack says, what he created in the domain of mind has remained imperishable; nearly all his great projects have been gradually realized in the course of time. He did not only scatter seeds into the future, but he gave form to, and built the house for, scientific work for the future.

In 1740, with the accession of Frederic the Great, the academy was reorganized and received new impetus and ever since it has stood at the front of scientific activity in Germany. Harnack says: When one considers the discoveries and works of the mathematicians, physicists, the chemists, the astronomers, the botanists and the anatomists during the 40 years (1740-1780) one can say that this academy stood at the very apex of scientific activity and was not surpassed by any other. He says, the German enlightenment of the 18th century was largely due to the academy, and it was first through Leibniz and then

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through the enlightenment that Germany entered upon world literature.

Amongst its members we find the brightest lights of science in Germany—such as Leibniz, Euler, Lagrange, Lambert, Lieberkühn, Achard, Gleditsch, the Humboldts, Helmholtz and others. In 1811, when the Berlin university was founded, the academy was affiliated with the university, but even to-day it is a greater honor to be a member of the academy than to be a professor in the university—it is the greatest honor that can be bestowed upon a German man of science.

The Berlin society did not begin as a private academy, but Leibniz and a number of the early members had in earlier years been connected with private academies in other parts of Europe. Leibniz, himself, confessed that Nürnberg first introduced him to chemical studies and that here he first learned what proved to be so useful to him in later years, namely, caution. The later royal societies in Europe were all more or less modelled after the first ones, and so we may say that, indirectly at least, all the European royal societies are an outgrowth and a development of the secret academies of natural philosophers of earlier times.

Summary.

In conclusion the following points may be noted. Points 5-11 refer chiefly to academies of the Renaissance and later.

1. Such associations of scholars have existed from early times, probably continuously, till the present; and before the modern university they were, and in some countries even now are, the great carriers of science.

2. These learned societies fostered open-mindedness toward truth which was in danger of being engulfed by ignorance and bigotry. They contributed largely toward keeping the idea of finality out of science. The men that belonged to them realized that the present is only a link between the past and the future, that science ever advances without reaching finality.

3. In various periods of their development the history of these academies constitutes the history of science or of literature, or of both, in the countries in which they flourished.

4. Those universities which are among the carriers of science to-day have adopted the principle of freedom which prevailed in the academies, because only by doing so could they attract the best scholars of their day.

5. The academies of the Renaissance and later cultivated the vernacular, and in northern Europe they were the birthplace of the newer German literature and brought about the enlightenment.

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6. Much of the work of the great reformers in science and religion might not have borne fruit had it not been for these academies. They did not only disseminate the writings of these great men, but they were to them a haven of refuge during times of severe persecution.

7. They held that education must touch life,—a principle which to-day needs awakening in our education from the kinddergarten to the university.

8. As to the principle: Education is not for the few alone. these academies were the predecessors of Pestalozzi.

9. They advocated religious toleration—an idea which we to-day, even, have not yet developed to maturity.

10. They were the forerunners of the great royal societies of to-day.

11. In 1643 the Great Elector of Brandenburg became a member of the "Fruchtbringende Gesellschaft," and several other princes of the same house were members. After the founding of the university of Halle the princes of the house of Hohenzollern were educated there in the liberal ideas advocated by the academies and represented there by Thomasius, a disciple of Grotius, and the first man who lectured in German in a German university. What all this means for education and for religion the culture history of Germany amply shows.

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STUDIES OF A CHILD. III.

By ALEXANDER F. and ISABEL C. CHAMBERLAIN.

OUTLINE.

Introductory.
I. "Discoveries," First Experiences, etc.
II. "Favorite Books."
III. Language (Early Development).
IV. Nature-Study, etc.
V. *Obiter dicta.*
VI. Observations, etc., on seeing Pictures.
VII. Original and Peculiar Words.
VIII. "Original" Languages.
IX. Sentences.

In this section particular attention is given to R's "discoveries" and first experiences, the early development of her speech, her reactions to pictures, etc., and other aspects of her psychic life of special interest to the teacher and the psychologist *vom Fach.* In these data her own naïve personality is in evidence and her mental processes are often laid quite bare. The rubric "Nature-Study" is but a fragment and represents only a chip of her block of knowledge. Her *obiter dicta* furnish again some delightful turns of speech and of thought as well. Of her "original" and peculiar words a larger number than usual are rather noteworthy. Her "singing" speech seems now in process of development with the aid (or the hindrance, perhaps) of fragments of her "Chinese," etc.

I. *"Discoveries," First Experiences and Questionings.* One of the most interesting and delightful episodes in the life of a child is its "discovery" of something new in action or in speech or in the world about. Scarcely less so are the experiments and questionings of the child mind. Some of R's doings of this sort are as follows:

1. *"Talking" into mug.* On March 12, 1902 (eighth month), R. took up her silver mug in her hands, brought it to her mouth, and "talked" into it, seeming highly pleased with a new experience. About this time she did the same with a tin cup also.

2. *Splashing water.* On March 23 she "discovered" that she could splash the water in her bath tub with her hand. For a week afterwards she did not repeat the action.

3. *Noise of dropped objects.* In the latter part of March

1902, she began to look after things dropped (accidentally or deliberately) on the floor by her when in her carriage. By the middle of April she had discovered that they made a noise when dropped, and began regularly to drop them to hear the noise, which made her wink. Experimentation of this order delighted her for a long time.

4. *Face under water.* On April 13, 1902, when in the bath tub, she deliberately put her face under water, but became frightened when the water got into her mouth, and held out her arms for her mother to take her. Later (June 7) she fell under accidentally and was quite frightened.

5. *Throwing things on the floor.* Towards the end of May, 1902, she had discovered how to throw things on the floor, especially spoons, so as to make a noise. She sought continually to do this for some time.

6. *Use of index-finger.* About the same time she used her index-finger to point at and examine things. She took great interest in running her finger along the groove of the table, cracks in the floor, etc., with quite an explorative expression.

7. *Ice.* On May 25, 1902, R. was given for the first time a piece of ice. She put out her hand and touched it, then drew back. This movement she repeated several times, but at last picked it up, laughing all the time and making little inquiring gurgles. She then put it up to her mouth and "made an awful face," at first. But she played with it till it broke into two pieces. One of these she swallowed, then looked very much "surprised" for a few seconds, gagged, and spat it out. She took it up in her hands again but it soon melted. Her own first term for ice was *col(d)-hot.*

8. *Flies.* By June 22, 1902, she had developed quite an interest in flies. She would sit on the floor and watch one as long as she could see it. She would also, when held up, try to catch them on the window-panes. On July 6, she managed somehow to pick up a live fly from the window-blind. It escaped immediately, whereupon she smiled.

9. *Looking behind things.* In the latter part of June, 1902, R. took pleasure in looking behind things,—mirrors, pictures, etc. She would repeat the action again and again with great satisfaction.

10. *Ornaments.* By August 24, 1902, it was recorded that R. always noticed anything in the way of ornament that people had on,—jewelry, watches, pins, medals, buttons, etc. She would go from one person to another examining their ornaments with curious fingers.

11. *Beefsteak, etc.* On Sept. 16, 1902, she had her first piece of beefsteak to suck, and enjoyed it hugely. She enjoyed as much the next day her first chicken-bone. On Oct. 12,

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1902, she ate soup for the first time, and the experience seemed rather pleasant for her.

12. *Upside down.* On Nov. 25, 1902, it is recorded that R. knows when her book is upside down and promptly turns it around.

13. *Image in eye.* By this time, also, she had discovered her image in her parents' eyes. She would point to it eagerly and say "baby," "baby," etc. She had earlier known the "baby" in the mirror, etc.

14. *Rolling over.* In the first part of December she had a new-found delight in rolling over and over on the floor, of her own initiative, or at request.

15. *Hot-air register.* By December 19, 1902, she had discovered some virtue in the hot-air register in the floor of her father's study, and began to take great delight in sitting down on it again and again.

16. *Whistle.* On Dec. 18, 1902, she learned to blow a wooden whistle, doing so remarkably well for one of her age.

17. *Soap-bubbles.* On Dec, 16, 1902, her mother made some soap-bubbles for R., while she was in her bath. She was delighted with the experience.

18. *Doors.* On Dec. 19, 1902, it is recorded that she was fond of experimenting with opening and shutting doors, going into the pantry, etc.

19. *Going into a corner.* About the same time she was very fond of going into a rather dark corner at the top of the stairs, whenever the door was opened.

20. *Turning round.* On Dec. 19, 1902, she was recorded to have turned round and round in a way that almost made the observers giddy. The same day she shook her head again and again with remarkable vigor.

21. *Kicking.* About this time she was noticed to be kicking at things with her feet and enjoying it as a new "discovery."

22. *Putting bread into milk.* A new experience on Dec. 19, 1902, was crumbling bread into her milk.

23. *Folding-door.* The same day, as she was lying flat on her back on the study floor, she took hold of one wing of the folding-door, and, finding that it moved to and fro, she kept at it for some time with evident satisfaction.

24. *Marking windows.* About this time she was very eager to mark the vapor or frost covered windows with a spoon, etc.

25. *Putting hands to ears, etc.* On January 6, 1903, for the first (?) time, R. put both hands up to her ears at once, and made noises. The sensation evidently pleased her, for she repeated it several times.

26. *Empty.* About this time she began to have some idea of

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emptiness, for she would look into her cup, when empty, and say "gone," with the expression of having discovered something. On March 24, when, as was her habit, she put the coffee-can back on the pantry-shelf, she noticed that it was not so heavy as usual, and said, "all gone!"

27. *Drinking.* In the early part of January, 1903, R. had some satisfaction in trying to drink out of a cup herself, and by the middle of the month succeeded quite well.

28. *Box.* On Jan. 14, 1903, she amused herself very much by opening and shutting a little tin box. When asked to throw kisses, she kissed *into* the box.

29. *Playing horse.* On Jan. 21, 1903, R., who was sitting on the floor, took a piece of string, and, taking the ends in her hands, put it under her foot, saying, "*bā! bā!*" This was really her first attempt to "play horse," the "*bā! bā!*" being "back! back!" which she had heard said to horses in the yard and in the street.

30. *Book upside down.* On Jan. 23, she looked curiously at a large book wrongside up in the bookcase and seemed anxious to set it right. She was much pleased when her mother did this.

31. *Typewriter.* On March 6, 1903, it is recorded that R. was very fond of lifting the carriage of the typewriter to see what she had written. For some time previous she had often tried to "write."

32. *Removing plates, etc.* On April 5, while having dinner at a restaurant, R. noticed that the waiter had not taken her plate away, and said "Hír lēdlE, tēk plē' wē!" (Here, lady, take plate away.)

33. *Tail.* On April 7, after she had been pulling the kitten's tail, her mother said, "How would you like to have your tail pulled?" and then "where's R's tail?" R. then tried to look at the place where her tail would naturally be, pulled at her dress, and said "all gone!" Several times on various occasions after this she said her tail was "all gone."

34. *Hiding.* On April 8, 1903, it is recorded that she was acquiring the habit of hiding behind her back, or beneath her folded arms, things which she thought her parents might take from her. This she did with a certain naïve skill.

35. *Needle.* By April 13, she had come to say, when anything pricked her "needle in néE" (needle in there), which phrase she also employed when her hair pulled hard or jerked.

36. *Moon.* About the same time, while looking at the sky, she exclaimed suddenly, "Man-i-mūi way up!"—having noticed the position of the moon high in the sky.

37. *Crackers.* On April 13, it is recorded that on several

occasions, as she passed by a grocery store, she would look at the window and say, "Wawa in néɛ!" (Crackers in there!).

38. *Bambino.* On April 13, 1903, she stoutly maintained that the baby in the picture of the Madonna was a boy and not a girl.

39. *Negro.* On June 8, 1903, while out on the street, R. saw a negro on a watering cart, and exclaimed, "yat black man!" She has never been afraid of negroes.

40. *Water.* About this time, she was very fond of seeing the fountain spraying water in the University Park. Whenever she got in the neighborhood of it, she would call out, "Bē tee watɛ!" (Baby wants to see the water!).

41. *Jumping.* About this time, also, she was very fond of trying to stand on her head on the bed and "jumping" head-first off her father or mother on to the bed,—a sort of human "tobogganing," as it were. This she would keep up until quite tired out.

42. *Whiskers.* On Jan. 3, 1903, R. made this announcement; "Tather has whickers, and granpa has whickers, and oncle has n't any whickers, and mama has n't any whickers, all these three people ha'n't got any whickers, only just tather and granpa."

43. *Watch.* On Jan. 5, 1904, she asked, "How dit tover tut (shut) on dis wats?" About this period she would often ask, "Tee time at tather's wats?" or want to wind it, or hear it tick close to her ear.

44. *Chair.* The same day she played peek-a-boo behind a chair, and exclaimed, "Peekin'-a-boo at it tsair!"

45. *Blue eyes.* On July 11, 1904, she asked, "Why don't you have *blue eyes*, tather?" She had, a short time before, spoken of a "*blue* tiger."

46. *Girl.* On July 13, 1904, she said, "Tather, you ar'n't a *girl*, you have *whickers!*"

47. *Blue water.* "Does the tun (sun) make the water blue, mama?" (July 14, 1904.)

48. *Drinking through a straw.* On July 15, 1904, she tried to drink water through a straw. The expression on her face when she succeeded, was a study. She was so surprised when the water reached her throat. For several days after she was eager to use the straw.

49. *Bumble-bee.* On July 18, she remarked, "I 'm writin' to the bumble-bee," then added, laughingly, "Bumble-bees tan't write."

50. *Sweat.* On July 20, she said to her father, "Your hands aren't tweaty, your tace (face) is."

51. *Raspberries.* The same day she said of raspberries, "When I pick 'em, they roll down at me,—they tall (fall) off."

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52. *Wind.* On July 20, 1904, when asked, "Is that Mr. Wind?" she said, "No! it's *Mrs.* Wind."

53. *Nails.* "Isn't any hair on my toe-nails!" Said while in the bath-tub, July 20, 1904.

54. *Barking.* On Aug. 2, when some one said of her squeaking toy-lamb that it "barked," R. observed, "No! lambs don't bark."

55. *Corn.* On Aug. 12, she said, with reference to the sweet corn at dinner, "Do you put butter on corns? I never saw corns with butter."

56. *Round.* On Aug. 16, she asked, "What does *round* say, mama?"

57. *Hammering.* By August 18 she had come to take great delight in hammering tacks into a piece of board, trying to drive nails into the wall, floor, etc., asking her father often to help her. Her first experiences in doing this "tickled" her very much.

58. *Storm.* On Aug. 26, looking out of the window, after getting up, R. said, "We're goin' to have a storm now, and a thunder and a black sky."

59. *Rats, etc.* About this time she was fond of pushing berries through the cracks of the veranda-floor,—"for the rat and the mouse."

60. *Animals.* On Aug. 31, she was asked, "Which would you rather be, a kangaroo or an elephant? A skunk or a woodchuck? A porpoise or a seal? A lion or a hippopotamus?" She answered *immediately*, "a kangaroo," "a wood chuck," "a porpoise," "a lion." Skunk, porpoise, woodchuck, she had never seen, even in pictures.

61. *X.* On Sept. 8, 1904, she asked concerning the letter X on her building-blocks, "What's that who opens?"

62. *Moon.* On Sept. 22, 1904, R. saw the moon and a star out of the window. Then the following remarks ensued: Said R., "Why can't we have a moon in our house? And a little twinkle star? If you had a long, long ladder to reach 'way up in the sky, you could get a moon and a twinkle star, could n't you?"

Her mother asked what the ladder could rest on? R. said, "A board who goes across this way," illustrating with her hands. She then said, "If you did n't have a ladder, you could take a big stick, one of those long pipes who stick up (a telegraph-pole), you know, and reach the moon with it, and pull it right down."

The idea of the ladder seemed to please her very much, and she enumerated several things one could get if one only had a ladder long enough,—moon, star, cloud, trees, etc.

63. *Shadow.* On Oct. 13, 1904, while being undressed for

bed in the evening, she noticed her shadow on the wall, and said, "I'd like to see her face, mama. When will the shadow-baby turn around?"

64. *Playing baby.* The same day it was noticed that for the first time she "played *baby*" with her dolls. Up to this time they had been simply "dollies." Now she began to be "mother," and treated them as "babies."

65. *Fire.* On Oct. 24, she stepped accidentally on a match-head and set it off, whereupon she said, "I guess it was a fire."

66. *Sunlight.* On Nov. 1, when trying to look at the sun, she exclaimed, "I can't see wery well. It squeezes my eyes up tight."

67. *Snow.* On Nov. 13, when she went out in the back-yard to play in the snow, she said, "Don't go away, snow!" Soon after seeing the abundant snowflakes thick against the sky, she remarked, "Dirty snow!" Then asked, "Is that where the white snow be's?"

68. *Pop-corn.* On Nov. 25, while some corn was being popped, she exclaimed, "The pop-corns are *talking to each other.*"

69. *Encyclopedia.* On hearing (Dec. 17) that her father had a new encyclopedia, R. asked at once if it had kangaroos in it. She was early shown the picture of the kangaroos in "Chamber's Encyclopedia."

70. *Skating.* The same day while scuffing her feet along on the smooth snow, she said, "See, mama, I 'm reg'larly skating on the sidewalk."

71. *Santa Claus.* On Dec. 22, she observed, " I would be scared to death, if Santa Claus was real,—if he was really real. He's only make-beblieve."

72. *Mouth warm.* On June 28, 1904, R. discovered that her "mouth was warm," and asked immediately if mama's was also.

73. *Long legs.* The same day she asked, "Do tather's legs go 'way up into his 'tummy?" Then she added, "Tather's legs are so long; R.'s are short, they cut the longness off."

74. *Name.* On Oct. 5, 1904, she asked, "Do little girls who ar'n't named *me* have dominos?" She had received a box of dominos as a present.

75. *Funny-bone.* On Feb. 20, 1904, R. struck her "funny-bone" against something for the first time, and did not know what to make of the sensation. When asked now where her "funny-bone" is, she answers "right in my elbow," pointing as she speaks. So far as recorded she seems to have had no other experiences with it.

76. *Palate.* Sometime in February, 1904, she heard her mother speaking of her "palate" and became interested in the

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word, wanting to know what and where it was. Her mother showed her, and for some time thereafter, R. kept putting her fingers in her mouth trying to find it. She would say, "I have I palate, hav'n't I a palate, mama? Has tather a palate?" etc. She seems to have mistaken the uvula for the palate several times.

77. *Arms and legs.* On Jan. 20, 1905, she asked, "How do they fasten your arms and legs on so they won't come off?" This was probably suggested to her by observation of her jointed dolls, with which she had been playing.

78. *Fire.* On July 7, 1904, she was much interested in the "joss-sticks" used to keep away mosquitos, and was "tickled" when permitted to hold one. After some time she remarked, "Mama, I want to burn something!"

79. *Ants.* On July 8, 1904, while running about barefoot on the piazza she said, "Flies won't hurt you, mama!" Then, shortly afterwards, asked, "Will the gnats (*i. e.* 'ants') bite me?"

II. "*Favorite Books.*" As she was always permitted to be and to come into her father's study, R. began very early to handle books and amuse herself with them. Beyond pulling the back off a single volume she did no serious damage to any. Her "favorite books," somewhat in the order of their use, might be enumerated thus:

1. "Own Book." A copy of Figuier's "The Human Race," with many pictures and an attractive leather cover, was about the first book to awake her interest. She became very fond of it, insisted on taking it to bed with her, etc. It was one of the very first things to which she applied the possessive "own," calling it "*own* book," and being unwilling to let it out of her sight. Later, she would take delight in putting it back in the book-case, pulling it out, etc.

2. "Ab-bee-dee Book." When she came to sit on her father's lap at his study-table she noticed a little leather-bound volume, "Bellow's Pocket French and English Dictionary," the appearance and size of which attracted her. From analogy with the letters, etc., on her building-blocks, probably, she came to call this her "Ab-bee-dee book," *i. e.*, "A. B. C. book," in imitation of what she had heard her parents say. As late as July 5, 1904, and for some time after, she would ask for her "Ab-bee-dee book."

3. "Indin Book." One of the earliest books which she took any interest in were some volumes of the "Reports of the Bureau of American Ethnology." She would lie or sit on the floor and pore over the pictures in these with great satisfaction. She would ask for them again and again, and often nothing else would suit her,—even now a new "Indian book" is sure to please, and is sought with eager anticipation, and the questions she asked about the "Indin mans" have been legion. When her father began to read a new book she would very often ask, "Indins in it, tather?" She soon came to recognize an Indian in almost any book or picture, and would run to her parents, exclaiming joyously "there's an Indin!" The volumes of the Bureau Reports she named herself "*Indin* book," from the pictures of Indians in them. She would eagerly ask to look at a new one when her

father brought it home. On Aug. 18, 1904, while away from home at the seashore, she asked her father where "all his Indin books" were.

4. "Kangaroo Book." When very young, she heard her father, particularly, talk about a kangaroo, and would often ask him to show her one. She became so inquisitive on this matter that he showed her the picture accompanying the article "kangaroo" in "Chamber's Encyclopedia" (Vol. VI, 1890, p. 391). She was very much taken with this, and for a long time afterwards would ask several times a day to be carried to the book-case, for her father to get the volume and show her the picture. The word *kangaroo* seems to have appealed to her mind very much as the records of language show. The picture in "Chamber's Encyclopedia," she used to describe as "tangeroo tan'in up an' tangeroo lyin' down an' tangeroo runnin' away," and uttering these words in dramatic fashion she would eagerly ask to see it.

5. "Dónkel Book." On Feb. 24, 1903, her father showed her the pictures in Kipling's "Jungle Book," telling her the name of it. An hour or two afterwards R. went to the book-case and brought "dónkel" to papa and mama. Her usual name for this was "góndji book." For a considerable time she was very fond of it.

6. "Bla ta." The picture on the cover of the "Black Cat" magazine early caught her eye and pleased her much. On April 5, 1903, it is recorded that she was fond of asking for the "bla ta" (book).

Other early favorites of hers were the "Home Ladies' Journal Book," "My Mĕ (Mary) Lamb Book," the "Cow Book," "Chinese Mother Goose," etc. She began quite early to be interested in magazines and was eager to see them when they were first brought into the house. On Jan. 23, when asked what her favorite magazine was, she replied quite naïvely, "Harper's."

The following list of her books was given by her at her father's request on Jan. 10, 1905:

1. My Æsop's book. 2. Alice Book (Alice in Wonderland). 3. Mother Goose, Mr. Wootin gave me. 4. My rag books: Baby's Objic Book, Mother Hubbard Dog Book, My Circus Book, (Noah's Ark). 5. [Babyland—this she could not name]. 6. My Lamp Book (Aladdin). 7. Mother Goose, Mrs. Wootin sent me. 8. My Old Santa Claus Book. 9. My Brownie Book. 10. My Cow (*or* Cowy) Book.—After naming it she added, "See the cow's back sticking up to the sky!" in reference to one of the pictures. 11. My Night Before Christmas Book. 12. My Peter Rabbit Book. 13. My Poyem Book (a copy of her father's "Poems"). 14. My Piggie Book (contains "This little pig," etc.). 15. My two Jungle Books (Rudyard Kipling),—here she observed "You write my two ones." 16. My Doggie Book (Tales from Puppy Land). 17. Mother Goose Book. 18. Henny-Penny Book (Miss Wiltse's "Folk-Lore Stories"). 19. My Chinese Mother Goose (Headland's). 20. Alice in the Glass ("Alice in the Looking-glass").

These were all named by her in the order given.

III. *Language* (*early development*). R. was born (Aug. 3, 1901) with a voice strong and lusty, which she readily exercised. The "gurgle" of satisfaction, when she had got rid of wind, or made a movement of the bowels, was soon quite marked. The pain-cries preceding this were also *sui generis*. Also her long-drawn "sighs" when going to sleep. By the

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beginning of September, 1901, she gave evidence of her enjoyment of her bath by the utterance of little "coos." Her dislike to being taken out and dressed was forcibly expressed by crying. On August 16, she uttered the sound "wɛ̆ hā." On September 8, she said "goo!" and "ah-goo!" for the first time. It was rather a cold morning and her mother held her in her lap near the open oven of the stove. She evidently liked the feeling of warmth on her bare skin and said repeatedly "goo! ah-goo!" By September 24, she laughed "ha, ha!" with a smile on her face, and, while lying in her parent's arms, would go over quite a repertoire of sounds with many smiles and half-laughs. One of these was "gɛ" with a sharp sound made by inspiration, something like a 'crow'" (as her mother described it). Others were "ng-gah," "ngoooooo," i ä i, etc. By this time her laughing and "crowing" in the bath-tub had become very characteristic. On September 27, she "talked" twice at her image in a large mirror. On the afternoon of October 12, she "talked" a good deal, the sounds being like the following which were taken down at the moment: Hĕ ɛ! (breathings); ĕ ĕ ĕ (long drawn out); kuk ĕ; ĕ; gū'ā'ā'; ē g'ū ā (yawns).

By October 23, she did not "ah-goo" so much, but emitted a sort of sharp "chirp." She now cried for her mother when she saw her, changing, however, so rapidly to smiling and "cooing" that it was almost impossible to note the metamorphosis. On October 24, as she lay in her carriage, kicking about, crowing and talking to herself, her mother said she laughed out "ha ha" three times. In the early part of December she often used "ah-goo" again, very distinctly.

On December 22 her mother noticed that she was apparently "talking" sentences, or using speech with accents, etc., which gave almost the impression of some foreign language. This she would do for a long time, often for almost half-an-hour. Sometimes she would keep her finger in her mouth, adding thereby to the peculiarities of her utterances. On December 29 she seems to have uttered her first "word." This was "ah!" quite separate and unreduplicated. It is probable that she had been using it for a few days past, as her employment of it showed ease and and readiness. By January 4, 1902, she used "ah ah!" not infrequently. The same day her mother asked her "Where's papa?" In reply, apparently, R. used āh-āh-āh,—just as if she were calling some one. Toward the end of this month (Jan. 22) she used her "chirp" commonly when her father took her up, and sometimes "chirped" to call him. At this date she seemed to be using another "word." This was "odji," which she employed only when she cried or fussed over anything. A little later she had developed special

"chirps" or calls for her parents (occasionally also for other persons). These she used particularly when her mother's back was turned, to attract her attention. She would also "blow" and make noises with her mouth, when in arms or lying down, —she was very fond of this. By February 17, it was noticed that the peculiar sound used by her when about to defecate was also employed in her "calls," "talk," etc. In "talking" she used her full repertory of sounds, and her calls to her parents became long and loud. On the evening of February 21, while lying in her mother's lap, she put the toe of her right foot into her mouth, but soon withdrew it, making a gesture of dislike (made a face, "turned up" her nose, etc.), and said, "w'äh äh ēh!" This was uttered as if expressive of a not very strong dislike.

By the end of February her interest in things outside the window,—horses, dogs, children, people, etc.,—had become very marked, and she "asked" for them and "talked" at them (at least made noises and uttered "calls" similar to those employed to her parents). On February 25-27, she was particularly active in this way, making "calls" and "chirrups" of all sorts, laughing and shouting at almost everything and everybody.

At this time, her mother thinks, she had some sort of understanding of the meaning of "bottle" (perhaps the first thing understood by her), "papa," "mama," "picture.(?)" "horse," (or rather, it may be, "something outside the window)," "want to go out," "love papa," "love mama," "peek-a-boo," and few more. Whenever she saw new objects in the street she looked "inquiringly" at her parents, as if she expected them to say something, or was about to do so herself. The "wee-wee" of the nursery-rhyme of "This little pig went to market," seemed clearly to be enjoyed by her now.

In the beginning of the next month (March 3-6) she was using the following sounds or words: "bō" (quite throaty), and often repeated, "bō bō bō;" "māmāmāmā" (with underlip drawn into mouth "pa pa pa" (whispered); "pápa" (quite plain) and "apápa;" "bábábáb." On March 9 she "loved" her image in the mirror, and said to it "pápa pápa." This word she also used to her father, when she wished to be taken up, and in the morning, when she waked, as if to call some one. For some time she had the fashion of almost whispering "pápa pápa," instead of calling it out loud, employing, however, quite often a longer form "papapa papa," which by March 9 was generally reduced to "pápa pápa," or "pápa." By March 10, her mother reports that she knew "by-by" (in the sense of going out in her carriage). She would hold out her hands and look at the door when asked "Ruth want to go

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by-by with papa?" She also seemed to know that her father was going out when she saw him put on his hat.

On March 17, after having for two or three days hardly used them at all, she took again to saying "pápa," "bába," etc.

At this time she used frequently "gai gai gai" (with one or more fingers in her mouth); "yaiyaya;" "ma-ma-ma," when hungry, or crying for something; also "wā!" and often "wā wā!" She "talked" into her silver mug, and took great delight in so doing. By March 28, she had a common habit of "calling" loudly to persons in and out of the house, children especially,—when she was carried in her father's arms along the street, she kept up a continual "calling" of this kind. She seemed able to direct her voice towards people with some accuracy, and appears to use the intonations of conversation, as if saying "Hello!" "Come here!" "Now, I've got you," and the like, to objects and persons. On March 28 she "talked" to some gold-fish in a house where she was visiting. She laughed and shouted with glee at seeing her parents kiss each other. During the early part of the next month (April 13) she appeared to be using definite sounds or expressions for "I want it," and others of satisfaction at getting things. For several days before April 20, she waved her hand at her father, mother, and other persons, when asked to say "bye-bye,"—this possibly in imitation of her parents, who used to wave at her when going out. She now recognized her father and mother as far as she could see them out of the window, and "chirped" loudly at the first glimpse of them. On April 24 it was noticed that she was fond of repeating to herself the phrase "dĕ̱ti dĕ̱ti!" By May 4 she had learned to shake her hand or wave it regularly. She did this originally in response to the request of her parents to "shake a dēdē,"—long before this she was accustomed, of her own notion, to shake her hand, with or without a toy in it.

About this time she took to "cooing" again and used "pápa" rather infrequently. On the afternoon of May 4, she suddenly took to employing this word again with considerable zest; also "māma." When she said "pāpa" or "māma" she often drew in her under-lip with a sucking motion. By May 18 she was applying the term "māma" to her mother correctly, but did not so accurately call her father "pāpa." She "talked" a great deal now, using such sounds as: ta ta ta ĕ ĕ; a vru lub lub; dada blublū; na na nĕ na; mammamma, etc.

By June 8 she commonly pointed out things (especially those she wanted) with her index-finger (the rest closed under), saying "E E E,"—a sort of infinitely varied grunt. On the night of June 20 she "talked" to the rising moon, out of the window. On July 6 she went to see some small monkeys

in a cage. She fed them with cherries, etc., and when they chattered she "talked" to them, apparently in imitation. On the evening of July 4 she "talked" at the fire-works. About this time she was again noticed to be using words: nɛ́m'nɛm ="food" (this she coined herself, and used, when she was hungry or when she saw her bottle); ublɛ! a favorite exclamation when interested in anything; ɛɛ! a multiform and multisignificant grunt; dä-dä-dä-dä, used without any special meaning.

By July 10 (she was at Bayville, Me., from July 9 to September 12) she had taken to "reading" the newspaper. She would hold it in front of her with both hands, calling out, just as if reading aloud, with very good expression, and in a most striking manner. During August she endeavored to say "hello!" making out of it "a-lō-alō." On August 24 her mother recorded the following: "'Mama' and 'pápa' still form the larger part of her vocabulary. She says 'bā-bā' for 'bye bye,' on the proper occasions. Also 'bu'h' for 'book,' sometimes very distinctly. She seems willing to try to pronounce any word beginning with *b*, but seldom gets further than the first sound. When asked to say 'pretty, pretty,' she gets her mouth already to say *p*, then says 'pi-tɛ́, pi-tɛ́.'" At this time, also, she gave "nɛm-i-nɛm" to her doll. By the time she left Bayville she could say "bai bai!" (bye bye) very nicely. She had a knowledge of many things: bath, bed, bobo, book, boots, burn, carriage, cat, chair, chin, down, drink, ear, eat, fly, jump, nose, out, shoes, stockings, table, teeth, up, etc., although she has not mastered all their names. On September 28 she said "mā'ū" in imitation of a cat. Also (pointing to the bath-tub) "dī bā," *i. e.*, "see bath." At this time she used also "bā" = watch, clock; "d'ā" = that (I want that); t'tī = kitty. On November 20 she said "baba" to her image in the eyes of her parents. About this time, while calling her mother "mama," she applied to her father the curious term "bab-ma," in the use of which she seemed to take great pleasure. For doll she used "dada," and for baby, "baba" (sometimes bēbē). She now knew, also, "bɛ" (bird), "bŏ" (bottle, box), etc. At this time she had become very fond of books, looking at them, turning over the leaves and "talking" about the pictures. She now said "mā ū" on seeing cats, and when asked what the dog says answered "bă!" and, for the bird, "bēi." Now she tried very hard to talk and endeavored to repeat what was said to her.

On November 23 her mother records the following words as established in her vocabulary: Bā-bā (or bēbē), "baby;" bāh', "watch, clock," bā-bā (or bai-bai), "bye bye;" bē'h (or bdĕh), "bread;" blō, "blocks;" buh, "book;" dä-dä, "dolly;"

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däk, "Jack" (the dog of a friend); dŏn (or gŏn), "gone;" miluk (or mluh), "milk;" wa-wa, "cracker, biscuit." On November 30 it was noted that she applied the term "bābā" (or bēbē) to the reflections of herself in mirrors, lids of pails (and like bright surfaces), her parents' eyes, the bell of the alarm-clock, the glass of the window (and of pictures, etc.), brass studs on chairs, etc., shadow on the wall, and practically everywhere that she could see it. By December 19 she was using "pápa" very seldom, and often applied the word "máma" to her father. At this time she would pat her father's knee, or a chair, and say "bába," meaning, evidently, "baby wants to get up (or sit up)." She used also dā, or dādā, in the sense of "baby wants to get down." On December 19, she said "pik!" when asked what the bird said. At this time, also, she would come to her father and say "bui', " *i. e.*, "build blocks," in which activity she had now become much interested. She now called women "gɛ" (apparently = girl) and used bē'bē very often for bā'bā. She used also "mā' " for man (on the street, in a picture, etc.), and sometimes "bŏ" for boy. Her mastery of *s* had not yet come, and in attempting to sound it she made a sort of *th* with closed teeth,—"*th* ū," shoe, etc. At this time, also, there were some signs of her trying to call her father "dādā."

On December 19, seeing a baby beside a bed, in a magazine-picture, she said "bĕ bába," *i. e.*, "bed, baby;" and, when she saw another picture of a baby in a bath-tub, "bā bē'bē," *i. e.*, "bath, baby." About this time she had a marked tendency to prefix an *a* to the word she used, or imitated, as a-bĕ (bear), a-bɛ (bird), a-bŏ (boat), amáma (mother), apápa (father), abába (baby). She knew now the meanings of "sing" and "thank you." In response to a request to "sing," she would do so in her own fashion. "Thank you" she expressed by nodding her head quite vigorously, and was beginning to use the same sign for "yes." For "no" she would now shake her head emphatically. She used now bā, or bābā, in the sense of "back," "put it back," "I want it put back," etc. Her vocabulary at this time included, among others not recorded, the following: Bā (with many variations of accent, tone, etc.), back, bath, clock, watch; bába, baby; bāh, bark (what the dog says); bē'bē, baby; bɛ, bird; bɛ lɛ́, blocks; bɛ lɛ́ blɛ, pretty; bī (what bird says); blā, stocking (from "black"); bŭ (or bĕ), bread, biscuit, butter; bū, burn; buh, book; dā (or dā'dā) down; dā (djā, djāk), Jack (dog's name); ēlt'it'tɛ, chicken; mīāū, cat (what cat says); m'lɛ, milk; vɛ, horse.

On December 23, when shown a picture of herself on a chair, she pointed to it and made the characteristic noise for "sitting, I want to sit." At this time she now used bā'bā and bē'bē,

apparently indifferently, of herself. When, on Christmas day, she saw the Christmas tree and its ornaments, she was very much pleased and kept saying "bli bli," *i. e.*, "pretty," and "bā bā," *i. e.*, "ball," in reference to the balls suspended from its branches. A little later (January 3, 1903), while "Aunt Emily," a friend of the family, was in the house, R. tried very hard to say "Emily," once she made it "Am'lɛ," but immediately afterwards "Alɛm." By January 6, her grunt-like "eh-eh-eh" has come to mean many things, particularly, "take me up," "I want it put up here," "put it down," etc. On this day she began to use "bōbō" for her chamber-chair and like utensils. On Jan. 5, R. was being taken out for a ride in her carriage. When on Woodland Street, her parents started to go down Downing Street towards Main, *i. e.*, away from the University, which is farther along on Woodland. R. began to cry and pointed in the direction of the University, shook her head, and said vigorously "no! no!" and *mama* (*i. e.*, "papa"), meaning thereby that she wanted to go to the University where papa was (she had been brought to see him there often). In the midst of her crying, however, she happened to look up and caught sight of the moon. When she had done anything particular, put her doll in a chair, placed anything particular on her head, built up her blocks, or when her mother or her father had done something of this sort for her, she would say, in a tone of satisfaction or triumph, "náɛ! náɛ!" possibly her re-rendering of "there! there!" At this time she used very commonly "wawa" (cracker) and "blĕ" (bread). When wanting to go out she would often say "bā'ba!" (bonnet), meaning thereby that she wanted to have her bonnet put on and be taken out. Sometimes she would put something on her head, go towards the door and say "bye bye!" waving her hand and pretending to go out. About this time she began to use "dâ" (dog) for "dog," instead of the earlier "d'ack" (Jack, the name of the dog of a friend). When asked what a certain friend of the family does when he smokes, R. stopped crying, pointed up and said "mūⁿ, mūⁿ," and seemed contented. Shortly afterward when approaching the University from the direction of Main Street, she held out her hands and laughed. She always recognized the University at this period, whenever she saw it. When coming home, she looked up at the moon again and said "mūⁿ mūⁿ," without any suggestion from her parents. On Jan. 6, it is recorded that she had been for some time in the habit of scolding herself in grunting fashion after doing something "wrong," such (as wetting the floor, spilling anything, etc.). At this time she was using regularly "mō" or "mŏ" (*i. e.*, *more*) in the senses of "give me some more, do it again, I want the other, I want another,

shake hands again, kiss me again, I want some more food, water, etc." When about to do something "wrong," she would say to herself "no! no!" and shake her head. When would go through the motion of blowing smoke and say "bai! bai!" *i. e.*, pīpe, pīpe." This section ends with her eighteenth month.

IV. *Nature-Observations, etc.* On Sept. 8, 1904, while at the seashore in Maine, she was asked about her knowledge of trees, plants, berries, fruits, natural objects, etc., with results as follows: Of *flowers*, she said she knew, clover, golden-rod, daisies, dandelions, roses, pond-lilies, buttercups. Of "*berries:*" choke-cherries, blueberries, blackberries, raspberries, strawberries, checkerberries, bunch-berries, juniper-berries, huckleberries, cranberries, acorns, rose-apples. Of *fruits:* Apples, pears, plums, peaches, melons, pineapples, bananas, grapes ("blue and white"), corn, chestnuts ("my *chestnuts* are at home,"—here she confused *chestnuts* and *chessmen*). Of "*stones:*" Little stones, big stones, and dirt. Of *natural objects:* Stars ("only yellow"), sun, moon, rainbow, clouds, sky, lightning, thunder, rain, snow, wind. Of *plants:* Trees, grass, "warms" (timothy), juniper, toad-stools. Of things relating to the *sea* and the *seashore:* Fishes, sand ("near to the shore"), jelly-fish ("purple and white"), I never saw a red jelly-fish, eels, boat ("row-boat, sail-boats, steamers"), islands, tide, wharf, logs, sea-weed ("big tails of sea-weed like snakes who crawl"). Of *insects*, etc.: Bees ("who sting"), flies, mosquitoes, butterflies, bumble-bees, moths, daddy-long-legs, spiders, caterpillars, snakes, beetles, worms, grasshoppers. Of *birds:* Bluebirds, sparrows, robins, sea-gulls, crows, pigeons.

This does not at all exhaust her knowledge, but is merely what she could tell at one sitting. At this time she had abandoned her earlier classification of all trees into "leaf-trees," and "Christmas trees," and was speaking of "Christmas trees" (fir, pine), "oak-trees" and "birch-trees."

V. *Obiter dicta.* Following are more of her sayings worth recording here:

1. Father, it 's raining! *Shoot* the rain! (Dec. 8, 1904.)
2. O, I feel so tired and *silly!* (Dec. 30, 1904.)
3. I feel like drinking *a whole tap* of water (Jan. 3, 1905).
4. I got a *cunning little chin*, hav 'n't I, tather? (Jan. 18, 1905.)
5. I want to show you my *collection* of dolls. (Jan. 1, 1905.)
6. Just a little bit! That 'll *saterfy* me! (Dec. 17, 1904.)
7. Won 't you be *jiggered* when Christmas Day comes? (Dec. 17, 1904.)
8. I would be *scared to death* if I had two mothers! (Dec. 22, 1904.)

She had been rebuked for some naughtiness, and when her father said to her "If you had some other mother you might have been spanked," she replied as above.

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9. Tather, can you stay home to-night? (Dec. 22, 1904.) Said when her father had gone out for several evenings in succession.

10. *Kids* mean little boys and girls, don't they, mama? (Jan., 1905.) Her mother said, "No, a kid is a baby-goat." R. then said "No it is n't, it's a little girl," and, when asked further "where did you learn that?" replied, "X says that way."

11. The idea! (Dec. 5, 1904.) She has lately used this expression quite frequently.

12. Did you ever hear of such a thing? (Jan., 1905.) She often used this as follows: "Did you ever hear of a gingerbread doll who could walk?" When her mother says "No! did you?" R. says yes, and proceeds to tell some extraordinary tale about it.

13. What did the little *filly-go* have on his feet? (Jan. 6, 1905.) This was due to hearing the rhyme

> Shoe the old horse,
> Shoe the old mare!
> Let the little filly go bare, bare, bare!

On the spur of the moment her parent asked, "What the little *filly-go* look like?" She replied, "It looks like a *panel*."

14. Did you ever see a cat turning upside down and standing on his back?" (Jan. 4, 1904.) To her parents' "Did you?" She replied "No!" and continued, "Either a dog? Dogs do that."

15. When will the gingerbread lady stop smiling? (Jan. 13, 1905.) Said of one of the ornaments of her Christmas tree.

16. I feel eat-y all up candy-y. (Jan. 13, 1905.)

17. Tather says *boots*. Why don't he always say *shoes?* (Oct. 30, 1904.) To this she added—"big, long shoes. I saw some long long shoes at Mr. N's store, who go away way up the knees."

18. I want to ride '*tummy-way!* (Jan. 17, 1905, and before.) '*Tummy-way* is the *belly-bumpers* of New England children, who coast or "slide."

19. I used to go to school when I was four years old (Dec., 1904.) She was then three years and four months and had never been to school.

20. Will tather be sorry if I don't kiss him good-night? (Jan. 18, 1905.)

21. I'm having a *toe-cage*, swinging on tather's old Mr. Toe. (Dec. 31, 1904.) Then she added, "Old Mr. Töp!"

22. Looks like a *bum* lady! (Jan. 3, 1905.) This was caught up from an acquaintance outside the home, and has been but once used by R.

23. Come back by dinner-time, won't you? (Jan. 3. 1905.) This is often her parting word to her father as he goes out of the house.

24. I want to learn everything so I can teach my dollies. (Jan. 14, 1905.)

26. I want to get a little more fresh air. (Jan. 18, 1905.) Said when her father was about to take her home.

27. I want a pair of skates who don't strap and a hawky-stick! (Dec., 1904, Jan., 1905.) During the winter she has been teasing for skates and a hockey-stick.

28. Does the wild *hurricane-fly* sting? (Nov. 19, 1904.) This is due to the line in the poem "The Night Before Christmas"—"As dry leaves that before the wild hurricane fly," which had been read to her. She also said, in reference to her blocks, "I'm going to make a hurricane-fly's house." For some time after she continued to play with the term "hurricane fly."

29. Has the man in the moon got the sky off him now? (Nov. 21, 1904.) Said when the sky cleared and the moon was again visible.

30. I feel back-yard play-y. (Nov. 24, 1904.)

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31. The much you hav' n't got, the much you've got. (Dec. 3, 1904.) This was repeated several times in an oracular sort of way. When asked where she got this expression she replied "Out of Mother Goose."

32. Why don't you let me go to the kindergarten? (Dec. 3, 1904.) She had heard some one ask her mother if R. went to the kindergarten.

33. "When I was four years old, did I use to go to school and have desk and a pen and a blotter?" (Dec. 4, 1904.)

34. I want some more stories tolden to my dolls (Jan. 18, 1905).

35. Mama, I'll roast, if you don't stop putting these many blankets (Jan. 8, 1905).

36. Mens don't wear muffs! (Jan. 4. 1905.)

37. Then there's June, that's in the spring-time. June is in the spring-time. (Jan. 14, 1905.)

38. Did you ever hear a lady say bow-wow? And mens and girls and boys? (Jan. 20, 1905.)

VI. *Observations and Actions on Seeing Pictures, Picture-stories, etc.* In the fall of 1902 she was already very fond of looking at pictures in books and "talking" at them or about them. On Dec. 19, seeing the picture of a baby in a bath-tub she exclaimed "bā, (bath) bē'bē!" The same day, looking at a magazine-picture of a baby beside a bed, she said "Bĕ bába!" *i. e.*, "bed, baby." On Dec. 23, when shown a picture of herself on a chair, R. pointed it and made her characteristic noise for "sitting" or "I want to sit." On Jan. 22, 1903, seeing a picture of a child with its hands above its head, R.. without any suggestion from anybody, put her hands up in like manner, and, later in the day, seeing another picture in which a little girl was putting her hands up to reach something on a tree, R. imitated this action likewise. On the afternoon of Feb. 24, while her mother was out, R. spent a long time looking over the pictures in Kipling's "Jungle Book,"—"dónkɛl," she called it,—of which she was fond. Soon after her mother came home R. went to the book-case and brought "dónkɛl" for her to look at. Another name she had for it about this time was "gŏndjī."

On March 6, she was looking at a picture of Shakespeare over the book-case and at one of Jesus next to it, when she called the second "mō'ɛ bī'ɛ" *i. e.*, "Shakespeare again" or "another Shakespeare,—*bi*ɛ was her reproduction, at the time, of *Shakespeare*. The term "mō'ɛ bī'ɛ" she applied also to a small picture of Robert Louis Stevenson. A picture of Gladstone she called "dō," the nearest she could come to his name at first. A picture of Browning she called "dāⁿdā" (*i. e.*, grandpa), from the white hair, probably. At the same time she called attention to the "bō'" (*i. e.*, bonnet) in a picture of Hosea, the prophet, and to the "bímbɛ" (pencil, or pen) in the hand of Stevenson. In the spring of 1903, she was very fond of kissing the pictures of her parents, relatives and friends dis-

played about the front room, and would ask to be carried round so that she could do so. Of her mother's picture, in particular, she would say repeatedly "tĭ máma dĕn!" "I want to kiss mama again!" She soon got to know a considerable number of these photographs separately. On April 5, 1903, looking at a picture of the Madonna, she exclaimed, "Bē' tlī on máma!" *i. e.*, "that baby is sleeping on her mama!"

Seeing, on June 8, 1903, the picture of an animal on its hind-legs she exclaimed: Tā ai lēg! "It's standing on its hind legs." At this time, also, she always recognized sleeping persons and animals, and would say, *e. g.*, "Yat bē' chlī" = "that baby is asleep." The same day, looking at the picture of a bear and her cubs, she exclaimed, "Tī máma bē'E, tī lī' bē'E," *i. e.*, "see the mother bear, see the little bears."

On June 9, when she saw a picture of a donkey, she attempted to sing a song, "Mary, sings the donkey, to his little lass," which a caller had sung to her several weeks before.

On July 20, 1904, looking at the picture (in Harper's for July, 1904), in which a lion was represented as having got up on a bed, she exclaimed: "A tunny (funny) lion lyin' on a bed!" and, again, "Here's a lion tittin' on a bed!" At this she laughed heartily. During the early part of December, 1904, she had given her "The Fables of Æsop" (Chicago: Conkey), the illustrations of which interested her much. Her mother also read many of the fables over to her. On Dec. 18, 1904, with the book before her, R. began to "read" and "tell" about the various pictures. Following are her remarks, as recorded by her father:

1. A fox and a goat sat down one time on a stool, but they fell down on the ground. They went to sleep on the ground, and they woke up and they heard somebody coming. And it was a lady, and she had *a great big bundle of a goat and a fox in it.* But she dropped it down and untied it so the fox and goat could look at it. But they ate it all up, the goat did. (Picture of fox getting out of well on goat's head.)

2. One day there was a stag out to walk in the pond, *but he did n't go 'way under.* But he was getting up to sit down in the water and *have a nice little sit-down.* But he got up and standed up and fell over and *standed on his back.* And when he got through standing on his back, he fell up and standed on his head. And that 's all of this. (Picture of stag looking into the pool.)

3. There was a cock and a hen once out one day, out their little house, but they *found some smoke coming out of the chu-chus,* but wer' n't scared to death, but they said to the chu-chus, "Don't you come, 'cause this is *where us live*" (here R. added, pointing to the top of the picture, "Way off there is where they live"). And the chu-chu said, "Well, I guess I won't come, but to-morrow morning I'll come in your house." And they said, "It's pretty nearly time for you to go out, chu-chu." But he rolled down-stairs like this (R. shook her head), and he *rolled his head over, got on his track, and run run all the time* till he got to his own house. (Picture of cock and the jewel.)

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4. There was a peacock once. A peacock went out to walk with a young lady. I guess that's all. (Picture of Juno and the peacock.)

5. The stag once lived in the ox stall *once a little while*. But at night he went in his own barn, in his own house. (Picture of stag in ox stall.)

6. But the fox and the goat they climbed up the tree,—the goat climbed up this tree and the fox climbed up that tree. They said together, "*Will you, O will you go with me, or won't you?*" (Same picture as for No. 1.) R. added here: "Turn round another page *who's empty*."

7. Somebody tied a poor lion in a net, and a little mouse came along to untie so that the lion could break that. Here (turning to picture of lioness on next page) the lion *brushed down his hair*. And look at the poor little mouse, he stepped on him. The lion leaned his head against the wall and put his hind pâr (paw) out like this (making motion with her foot), and stepped on the little mouse. (Picture of lion and mouse.)

8. Here a stork and a fox. And the fox said to the stork, "Will you, O will you come over to my house?" The stork is getting ready to go over to the fox's house. (Picture of fox and stork.)

9. One day there was some frogs and rabbits come together in a *shower of water*, here (then she said, "How did that one jump here?" pointing to one of the animals in the picture). But these rabbits were *going to a tea-party at school*, but they said to the brother, if all the brothers could come with me and let the mother stay home and get the dinner. (Picture of the hares and frogs.)

10. The fox and the mask went out to walk one day, but the fox holded the mask and *went out to walk on the chu-chu cars*. (Picture of the fox and the mask.)

11. There was a fox and a cock up on top of a fence. But the fox said to the cock, "Will you come down here and stay down here all day, and have supper with us some time. *There's lots of bed for you*. Some time to-night. (Picture of the cock and the fox.)

12. A boar and a ass went out to walk in the woods one night, and they found some smoke coming out of the chu-chu. (Picture of the boar and the ass.)

13. The tiger and the fox said to each other one day,—the tiger said to the fox and the fox said to the tiger, "A *Chinese dollie* would do for you for your Christmas present, would n't it?" The tiger said to the fox, "O will, O will you, O won't you come in to my house?" (Picture of fox and tiger.)

14. A stork wanted to go to a tea-party, to have his dinner. So he did. (Picture of stork in "The Frogs desiring a King.")

15. A lion and bulls went out to walk one day, one night. Last night they went out to walk. But that one 's *trying to smell of the lion* and see if it 's something good to eat. And the lion said to the bulls, "*Japanese*," he said to them. (Picture of the lion and the four bulls.)

16. A peacock and some ducks, and stork, and all the birds, and the magpie and a owl. And what is that kind of a thing? I guess it must be another kind of a stork—a funny stork. I don't like that kind of a stork, do you? There was a rooster—is that a rooster? A cock leaned 'way down on the ground to get some dirt to eat (moving her own head), and that's the way cocks eat. (Picture of the peacock and the magpie, surrounded by all the birds.) To this she added, "The animals went out to walk. The owl and the stork went out to walk.

17. There was a pig and a fox leaning through that window out of his house. There was a mother pig and great big tather pig, and

mother fox,—that's a tather fox, and that's a mother's. And the dogs were trying to get to the fox, but they could n't. The fox ran away as fast as he could. (Pictures of the sow and the wolf and cat and fox.)

18. The dog went out to walk, and opened the door and he went into somebody's house and *climbed on the shelf* and got a bone out of some pork (meat), and he ate it all up. (Picture of the dog and his shadow.)

19. One day there were some sheeps and wolfs and dogs and sheeps went out to walk. I guess that's all of this. (Picture of the wolves and the sheep.)

20. A fox and a bear. The fox said to the bear, O will you, O will you *come over to the store?*" I guess that 's all. (Picture of the fox and the wolf.)

21. The mule and horse went out to walk one day. And the mule had something on his back, but the horse did n't. (Picture of the horse and the laden ass.)

22. The fox is eating the bramble-bushes. (Picture of the fox and the bramble.)

23. The goose and the man. They found some apples he thought he would eat. That 's all, I guess. (Picture of the man and the goose that laid the golden egg.)

24. That's when they went out again (Picture of the vain jack-daw being stripped of his feathers).

25. The birds and the eagle. (Picture of the hawk and pigeon.)

26. The fox fell down in the well again. That fox is trying to pull him up again. (Picture of the fox in the well.)

27. The stork and the fox went into a house. But he went out and he found his mother. (Picture of the wolf and the crane.)

28. A kid and a wolf went out to walk one night. The *man and the moon shining out* one night. The *dandelion and the daisies shining out.* (Picture of the kid and the wolf.)

29. The mouses and the cat, and the rats ran round. This is *the rat who 's got the long tail.* All these are the mouses. (Picture of the cat and the mice.)

30. What does that bird be so fat for? What does he be so fat? Cunning fox! (Picture of the kite and the pigeons, and the fox and the crow.)

These 30 "stories" were all told at one sitting, and the effect of fatigue in the little narrator is perhaps noticeable towards the close. Her use of familiar expressions often clothing common experiences of her own is characteristic: Ate it all up, went out to walk one day, once a little while, will you, O will you? going to a tea-party, stay home and get the dinner, come over to the store, etc. Her attention to the details in some of the pictures is shown by the mention of the "smoke" in No. 3, the dead mouse in No. 7, the "dandelions," and the daisies in No. 28, the long tails of the mice in No. 30. Faults of the pictures are partly responsible for her seeing "smoke" in several of them (*e. g.*, Nos. 3 and 12), for thinking it was *night* in some others (*e. g.*, No. 12), for taking a crane for a stork (No. 27), a wolf for a fox (No. 17), a wolf for a bear (No 20), the "bridge" for a shelf (No. 18), etc. In many of these her own individuality of expression crops out (*e. g.*, Nos. 1, 2, 3, 5, 7, 9, 11, 13, 15, 26, 29, etc.). The mention of "Chinese"

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(No. 13), and "Japanese" (No. 15) is significant. These "stories" give insight into her thinking and her method of composition better than anything else, since they are all in her own words, unchanged, and uninterfered with,—exactly as she spoke them.

On Jan. 18, 1905, she looked at pictures in Headland's "Chinese Mother Goose Rhymes" (N. Y., 1900), and told about them as follows:

1. One little spider went up an' down, and six little boys were playing. A spider was going up and down in the air, and two little Japanese fellows were playing with a whip . . . . It said sixteen up to that funny one (picture on cover).
2. Two big Chinese fellows said to the little one, "How do you do?" (p. 7.)
3. A little girl looking at her toe. (p. 8.)
4. Three little boys were looking at a tree (p. 9).
5. One big Chinese lady had a little butterfly on her finger (p. 10). —As she said this she showed with her own fingers how the butterfly was held.
6. One Chinese baby, one Chinese lady, one Chinese man and little boy. And they lived in a big house with funny kind of windows, and they said to the little boy, "How do you do?"—that Chinese lady did (p. 11).
7. Mama will get some dinner for the little baby there, while the man is holding her (p. 12).
8. Baby and papa and I were down at the seashore,—and that's all, I guess (p. 13).
9. One pig and a man was watching the black pig eating his dinner. There is a picture of a pig up there! (p. 14.)
10. Gran'pa and I and two little girls, and baby and papa was feeding baby, and papa said to baby, "I think you had enough" (p. 15).
11. That man says, "I think you are *my* little baby. (p. 16.)
12. One big boy and one little boy were playing with *theirselves* and having their pictures *tooken*. And they were standing still as a mouse. (p. 17.)
13. One man and a boy were walking out to get some water (p. 19).
14. The boy was going to get a bag, and he did n't know where the *bag-store* was (p. 20).
15. A little boy and a girl were out to walk one day, and the little boy said to the little girl, "I think you are tired," and the little girl said, "I am." And the boy sat down and rocked her to sleep. (p. 21.)
16. That's about a man standing still and having his picture *took* (p. 22).
17. A little girl was sitting on a chair and sewing something. (p. 23.)
18. A little girl and a lady were walking out one Monday. And the little girl said to the big mama, "I want a drink of water." The little girl said she wanted a drink of water, that's all (p. 24).
19. A big girl was wheeling something round and round and round and round (p. 26).
20. A big man was rocking baby to sleep, and baby did cry. And she wanted a drink of water; she wanted her supper (p. 29).
21. A boy and a man were in a barn somewhere, and the man said to the little boy, "How do you do?" (p. 30.)
22. And a little boy had a butterfly on his finger (p. 31).

23. This is about a baby and a lady and a boy went out to walk one day. And the boy said to the man, "I want a drink of water" (p. 32).
24. And a man was sitting on a donkey *tail-way*, and the donkey was lonesome without anybody sitting *around front* (p. 33).
25. Those big two Chinese boys found a grasshopper, and they thought it was a *dead* bumble-bee (p. 34).—Then, pointing to the musical notation, she said, "This 's what the birdies sing. Are you writing the music, tather?"
26. And two men were carrying *a stick of pail* with two pails of water on it, with a string to it,—they cut a piece of stick off a tree. (p. 36.)
27. I hope that man is n't going to kill that thing up there. One little baby and one man were sitting on a chair and looking at that little thing there (p. 38).
28. A little girl broke a bottle at home, and they had to go down town to get another bottle for the little girl (p. 39).
29. A man was looking at a crow on a tree, and the crow said to the man, "*Crow!*" (p. 41.)
30. I don't really know what that thing is. Is it a tower? (p. 43.)

Here R., having spoken the foregoing without interruption, said, "I'm too tired," and occupied herself otherwise.

Some of the "stories" have no direct relation to the pictures concerning, as may be seen by examining the book in which they occur, being more than once relations of her own personal experiences. Some are brief but accurate descriptions of the pictures. Several exhibit her naïve genius, *e. g.*, Nos. 12, 14, 24, 25, 26, 29, particularly, Nos. 24, 25.

On October 25, 1904, R. was looking at a picture of a mother holding her little girl. The following conversation ensued:

Ruth. "I don't like that kind of a mother?"

Mother. "Why?"

R. "She 's got dark hair."

M. "Don't you like dark hair?"

R. "No! I like mothers who have light hair. I like little girls who have dark hair, though." Her own mother's hair is "light."

VII. *"Original" and Peculiar Words.* Of words of this sort the following may be added to those previously recorded:

1. *Beep.* Said of the dripping of the water-faucet (Dec. 20, 1904), "It's *beeping*." Used also since as a regular word.
2. *Krookra.* Declared by her on Dec. 20, 1904, to mean "Christmas."
3. *Fees.* Defined by her, Jan. 19, 1905, as "handles of doors." On Jan. 21, she said, "I guess handles of drawers are *feezes*."
4. *Coughin'-pops.* On Jan. 10, 1905, some one said of the picture of a baby that it looked as if it had had the measles, the whooping-cough and the chicken-pox. R., who heard what was said, observed at once, "He looks as if he had the *coughin'-pops*. This expression is perhaps her creation from "whooping-cough" and "chicken-pox," confused in her mind.
5. *Eny-mony.* The same day she said "I want one of those *eny-mony* books." She had just before got off "eny mony, puddin' an' pie!" This is borrowed from the counting out rhyme.

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6. *Pining.* On Jan. 10, 1905, she said "I'm going to do some more *pining!*" By this she meant picking up pine-needles which had fallen to the floor from the Christmas tree.

7. *Scun.* Soon after she said, "Do you want me to *scun* 'em up?"

8-9. *Dunk, cuddy.* On Dec. 22, 1904, she observed, "I want a *dunk* of *cuddy*. On being asked what it was, she replied "it means something good to eat."

10. *Write-penna.* "I want a *write-penna*" (Jan. 6, 1905). By this she meant a pen to write with.

11-12. *Filly-go* and *hurricane-fly.* See under the rubric *Obiter Dicta.*

13. *Panel.* When asked (Jan. 6, 1905) what the "filly-go" looked like, she said, "It looks like a *panel.*"

14. *Jindō.* On Jan. 14, 1905, when asked what she was doing, she replied, "I'm playing *jindō*," and added, "*jindō* means 'tongue.'"

15. *Pangaroo.* Given in a list of animals she knew, Jan. 18, 1905. Modeled on *kangaroo.*

16. *Rag up.* On Jan. 18, 1905, while twisting herself up in the curtain of the folding-door, she said, "I must *rag up* the curtain."

17. *Tomorrowteen.* The same day, while repeating some numbers, she asked, "Do you know what *tomorrowteen* means?" Then she added, "It's a funny kind of number"

18. *Oneteen.* On Jan. 8, 1905, while repeating numbers, she used several times *oneteen.*

19. *Loosanga!* The same day she used this word as a sort of exclamation.

20. *Toe-dy nut.* On Jan. 8, 1905 (and for some time before that), she called a Brazil-nut a "*toe-dy* nut." This came, doubtless, from her having heard this nut spoken of by the colloquial name, "nigger toe."

21. *Crickety.* On Jan. 8, 1905, she said "Georgiana 's a *crickety* doll." This was because her doll was jointed and creaked a good deal when its arms and legs were moved.

22. *Tail-way.* Used Jan. 18, 1905, of a man sitting facing the donkey's tail (in a picture). The proper way, according to her, was "around front."

23. *Stick of pail.* Her term (see further under rubric relating to *Pictures*) for the carrying stick used by water-porters.

24-25. *Dinnerer.* On Nov. 18, 1904, she said to her mother, who was getting breakfast ready, "I'll get dinner ready," then added, "I'm the *dinnerer*, and you 're the *breakfaster.*"

26. *Ham Componion.* On Nov. 25, 1904, she called "The Woman's Home Companion," the *Ham Componion.*

27. *Napmink.* This was long her common word for table napkin.

28. *Pick nutter.* On Dec. 17, 1904, she said of a nut-pick, "This is a *pick nutter.*"

29. *Cold.* She still uses very commonly "*cold*" for "coal."

30. *Deezy.* She spoke of the steps being *deezy* (Dec. 18, 1904). When asked what it meant she replied "Steps so that people won't fall on them." *Deezy* would seem to be the opposite of "slippery."

31. *Allwheres.* On Jan. 21, 1905, she was playing painting the wall. In answer to the question, "Where did you see anybody painting the wall?" She said, "Allwheres."

32. *Zogzy.* Used Jan. 21, 1905. Her father had said to her, "you know what *deezy* means." She said "and *zogzy.*" She defined *zogzy* as meaning "log you sit on when you go bathing at the sea-shore."

33. *Skade.* In writing her "Chinese" letter, Jan. 21 she used the word *skades*, and said to her father, "Do you want to know what *skades* mean." And, then "*skades* are rings you put around your finger" (using her hands to show how).

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34. *Snake-business.* Soon after, while still writing, she exclaimed, "This 'll be the *snake-business* I'm doing now." This she explained as "the snakes going into the water."

35. *Whole sail* (?) During the same "writing," she looked up and said, "Was it in Elm Park, tather, we saw the ducks?" then added "the ducks were in the water, a *whole sail* (?) of ducks." When asked what the word meant she said, "I don't know, only ducks."

36. *Gar.* Defined Dec. 30, 1904, as "a *gar* is a boy who don't like to go to skooyal."

37. *Scissors-pudding.* This was her first attempt (Jan. 3, 1905) at "*Yorkshire* pudding." The "sizERs" seemed to have no connection, apparently with *scissors*, until by an after-thought, R. said "it 's scissors-pudding, because there's scissors in it"—this was said somewhat facetiously. Her mother, rightly, perhaps, says that the *shire* of "York*shire* suggested *shears* (a word not very much used by R.), then *scissors*.

38. *Dish-elephant.* On Jan. 3, 1905, when given some money she said, "I'll put it in my *dish-elephant*." Her elephant toy-bank is made of glazed ware, whence the analogy with *dish*.

39. *Shirleywood.* On Dec. 30, 1904, she said that she lived on *Shirleywood* Street." This word she evidently formed from "Shirley St.," and "Maywood St.," "Hollywood St.," with which she is familiar.

40. *Toe-cage.* See under rubric *Obiter Dicta*.

41. *Tipping.* "One walking toe and one *tipping* toe" (Oct. 31, 1904).

Specially interesting in this list are Nos. 1, 2, 8, 9, 10, 19, 30, 32, 33, 36 for "original words." For twists of form or signification: Nos. 6, 21, 22, 23, 28, etc. Nos. 4, 11, 12, 17, 18, 34 are *sui generis*.

VIII. "*Original Languages,*" *etc.* So far she does not seem to have developed any other "original" language like her "Chinese" or "Skov'n," previously described. When asked if she can still talk them she says "no," or "I don't want to," and she has not been heard to use them of late. On Jan. 18, 1905, when asked to talk "Chinese," she got off the following, which might almost pass for a "counting-out" rhyme:

Hoozin dee and sixteen and cordy, forn, sane, bay, bang, hammock, chairs, cherub, blueberry, huckleberry, raspberry, Smith.

A short time after, when asked to name the animals she knew, she enumerated these:

Kangaroo, pangaroo, tigaroo, elephantroo, lionroo, donkeyroo, dogroo, bearroo, camelroo, sheeproo, pigroo, horseroo.

It is curious that she took from *kangaroo* (evidently the model) not—*aroo* but *roo*—and used it as a terminal,—one might have expected "dog*a*roo," "elephant*a*roo," etc.

The same day, shortly after the above was recorded, she said that she would *write* some "Chinese." She took her pencil and while making marks all over a piece of paper, spoke the following:

Hoozin dee and *coffin dee* and the dawn's early light, and all in the

night we go to bed at six. All in the morning we get our dinner by seven o'clock, and that's the home of it. And I got a pair of skates, and hâky (hockey) stick and a ball, And there's all the ships in the water and I must go out in the backyard to see the ships; that's all we could do. And that's *ashâwn* ship in the big water, and there were two men, two boys and two ladies sitting in it to go into everybody's house. And this is a knife you cut the meat with, all the *skayzin skawn*. And here's the *nowlëes skayst* and the man-and-the-moon up here and all the *skades*. And the *skades* are socks und skeins and watches *kon* this is *baskwá* day and this is summer day, and I forget when spring-day came [Here she wanted her pencil sharpened and said: I guess I used up all the writing of this pencil]. And now is *geestos hay* dis fish, and this is I'm going to fish down in the seashore. And where's my bait and pail. And stars look out and don't fall in the water. And sailors *aynons squandge*. Knock said pain, and there's a lovely water's green, and the sake-saw is staying on the bird's head, and that's what the bird said. And here's the bird's nest, and we begin and put the bird in, and he don't come out. [Here she observed: I have to draw some more *hoozin dee*.] This 'll be the snake-business I'm doing. I mean snakes going in water. Were there ducks at Elm Park, tather? —A whole sail of them! It's *bart's* barn, *bart's* barn, and the *scorkles* has rocks, a lounge, and there's the lounge I see.—I want to lie on because I am very sleepy. *Forskell* on and *skolles* ace and on. It's *gollis skottis gosp*. *Gok a nuswin*. *Swaydin's* potters scout. Swun. I don't know. *Ans sopis* whisper.

When done she observed: "This 'll be *zogzadee* instead of *hoozin dee*. Perhaps by *zoggza dee* she means to designate the curious stuff she now "sings" off,—*hoozin dee* being a synonym for "Chinese." Just at present (it was first noticed by her mother about the early part of October 1904—but is now much more developed)—she often "sings" as she goes about the house or is sitting at leisure, or even playing, a rhythmic but unintelligible song. Sometimes this changes to English words, and sometimes there can be detected a good deal of "Chinese," and the like in it.

IX. *Sentences, etc.* As illustrating the virtues and defects of her conversational style the following sentences, etc., covering the period from July, 1904, to January, 1905 (thirty-sixth to forty-second month), may be given:

1. *All* I taw (saw) the children playing in the church, *you know* (July 8, 1904).
2. O, all the children were going to church, but I don't want them to (July 8, 1904).
3. He did n't hurt me, he came right close to me! (July 15, 1904.) Said of a dog who rushed by her.
4. This is a nice tool breeze tomin' t'rough the window. (July 17, 1904.)
5. I don't want to be *tooken* up to the house. (July 18, 1904.)
6. Oh, the house *in back of* us! (July 19, 1904.)
7. Did you eat your blueberries and raspberries *in the bush?* (July 20, 1904.)
8. There is lots of blackberries at *a Tirley Street home* inne (in the) field. (July 20, 1904.)
9. How good it *smells* here! (Aug. 12, 1904.)

10. I don't want to go in those *nasty* boats! (Aug. 19, 1904.)
11. I don't want to tell nothing at all (Aug. 25, 1904).
12. Mama, can I stand up in the tub without my shirt on, before I take a bath? (Aug. 27, 1904.)
13. I don't want you to wash me *now yet* (Aug. 27, 1904).
14. *Most* a big girl, ai'nt I? (Aug. 27, 1904.)
15. Wait till I get down stairs, I won't forget. (Sept. 3, 1904.)
16. Yes I are, *either!* (Sept. 22, 1904.)
17. I guess it was a *surely* piece of wood. (Oct. 24, 1904.)
18. I did *pretty most* of it. (Nov. 13, 1904.)
19. There's two dogs barking *at 'emselves!* (Nov. 18, 1904.)
20. My footwarmers are all *piled together inside.* (Jan. 1, 1605.)
21. Can't you stay *before* (*i. e.*, till) night? (Jan. 1, 1905.)
22. I'm going to *stand together* at Helen McGwee's and see *how big her is and me* (Dec. 30, 1904).
23. You have too many dishes, you only need two (Dec. 31, 1904).
24. It looks *better like* a rabbit (Dec. 31, 1904).
25. I'm *a little bit bigger* to have a Tam-o'-Shanter (Dec. 31, 1904). Her mother had previously told her that she could have one when she was "a little bigger." This was R's way of saying "I'm big enough now to have a Tam-o-Shanter."
26. The snow is deep now, so I can go out to play! (Jan. 3, 1905.)
27. I *shutted* the dampers, it *blowed* on them (Oct. 31, 1904).
28. It (kitten) was *tooken* away from its mother (Oct. 31, 1904).
29. You sit down *with Lucy and I* and Betty (Jan. 8, 1905).
20. I want my tree *litten*! (Jan. 8, 1905.)
31. A cunning little bit of thing *you never saw* (Jan. 8, 1905).
32. Move your legs together and keep them together! (Jan. 14, 1905.)
33. Never mind looking over them again to see if they go on this foot. (Jan. 14, 1905.)
34. That's a *surely right* one! (Jan. 14, 1905.)
35. I want to pull it 'way 'way far up (Jan. 14, 1905). Said of stockings.
36. Cleaning house is an awful job *I never saw to do.* (Jan. 23, 1905.)
37. I had this an awful long time ago (Jan. 23, 1905).
38. You hav n't *aten* it all up. (Jan. 11, 1905.)
39. If I would go with you that would be a shame (Jan. 4, 1905).
40. I don't want to have any more talking. (Jan. 18, 1905.)

Interesting are the verbal forms exhibited in Nos. 5, 27, 28, 30 (*litten* is *sui generis*), 38. Also the phraseology in Nos. 22, 24, 25, 31, 36, in particular.

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CERTAIN DEGENERATIVE TENDENCIES AMONG TEACHERS.[1]

By G. Stanley Hall.

Many diseases (the English Pharmacological Society catalogued over seven hundred) have always preyed on man, and one of the noblest and most influential of all professions has always been that of healer. The mind has its own special pathology. More recently the study of crime, or moral aberrations, has become an academic department with a copious literature of its own. Pedagogical pathology is barely ten years old. It now has its journals, its experts, and the faults of children are catalogued in dictionaries and prescribed for in articles, and, in France, even treated by hypnotism. Last comes the pathology of religion which, we are now coming to understand, like everything else, has diseases of its own among both primitive and cultured people; and one of the most interesting of the premises of the future is that we shall have established norms to distinguish what is healthful and what is morbid in religious consciousness and life. The pathology of teachers and teaching is a still newer topic, to a very few aspects of which I have the honor to invite your attention this morning. I am already fully persuaded that this theme, too, has a great future and that the next decade will witness the development of a new chapter in education devoted to the diseases of the body and mind of male and female teachers and of educational systems.

Copious as is the literature on the health of pupils, almost nothing has yet been done in this country in studying the health of teachers, and in Europe many problems in the field are unsettled. Teachers' work is extremely monotonous and allows little change for the ups and downs of health. No school ventilation is adequate, and teachers are not only exposed to impure air loaded with chalk and other dust, but to all the infections in the community. The diseases most common among teachers are nerve strain and tire, colds, disorders of the throat and lungs, hemorrhoids and troubles of the lower part of the trunk. Anemia and enlargement of the heart are thought by Wehmer to be common. In Germany, although the teachers at the outset of their career undergo physical examination which weeds out all the weak, it has been found that

[1] Address before the Social Science Association, April, 1905.

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up to about forty, deaths are more frequent among them than in the average of the community, and that they die earlier on the average down the grades, that is, professors outliving primary teachers; that, in the country with small pay and more exposure, mortality is greater. Galton found that out of 116 English teachers, 23 had suffered a serious breakdown, from which 21 of these thought that they had never quite recovered. Those who have studied the subject most thoroughly lay great stress upon the restricted expressions of individuality which the modern methods of the public school, with its supervision and incessant prescription, affords. This, it is often said, damps, if it does not destroy, the zest that every one ought to feel in his calling, predisposes to a feeling of tedium, if not to depression, nervous irritability, and sometimes even hypochondria.

An American physician, who has a large practice among female teachers of one of our large cities, tells me that they are, in some respects, a class by themselves, their work predisposing them to certain diatheses and to wearing themselves out before their time. All insist that the long vacation is none too long for teachers, and that evenings and nights should be kept free, and that other occupations and all unnecessary work should be indulged in with moderation always, and very tentatively in the first years of teaching, before one learns the subtle line so easily crossed between normal income and output of energy and overdrawing of one's energies.

Few who enter the service of the public school expect to remain for life. Their work is, therefore, if not a makeshift, usually more or less temporary and provisional. But a small per cent. in the country at large have any professional preparation, and the pay, while often very attractive to those who have debts to pay for their education, or desire to lay by something for other fields of work, is not satisfactory as a permanency. Nearly one hundred thousand teachers will leave the profession this summer. When times are hard the supply of male teachers increases, and when business flourishes it declines again. Many of the ablest men in the country have served a brief apprenticeship in the teaching profession. Some of them have done something to elevate it, but would, of course, have done far more had they remained in it. No one would claim that it is generally the worst who drop out. Were it so, selective influences would always steadily improve the quality of the teaching force. Unfortunately, despite many striking exceptions which will recur to every mind, on the whole, those who remain do so not because they love the work supremely, but because opportunities to better their condition do not open to them. In grammar and even high school grades very few indeed plan their work as a life career. Even promotions in grade or pay are not made

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on merit, and, in the rare instances, where a new superintendent or board has attempted to drop inefficient or superannuated teachers, their friends and the public rallies to their support. In some communities there is a confessed tendency for the corps of teachers to degenerate in quality. Few who are found in the ranks at the age of fifty would not have been shocked and depressed if condemned to this fate at the age of twenty-five. Some, especially men, who enter the profession with enthusiasm, are disenchanted because they find so little independence, and soon realize that in the question of methods, course of study, text-books, discipline, no provision is made, to submit these vital matters to those most concerned in them — namely, the teachers themselves. In our system it is ever harder for a self-respecting and able man to adjust himself to the dependent conditions of actual teaching. Whenever the question of permanence in office and of pensions is raised, this problem of deterioration always looms up in the background, though it is rarely named. In the grades the teacher must obey the principal and superintendent.

In the high school he must follow the prescriptions of the college. Moreover, teachers' organizations, which were begun by Horace Mann, and have been such a blessing, have now reached the point where certain dangers threaten. Sometimes weak officials of the craft, or questionable methods, have been indirectly sanctioned by the authority of teachers' organizations.

Last summer Miss M. A. Haley advocated that teachers should organize on the principle of labor unions to demand higher wages and better conditions generally. The major premise of this argument was that the status and pay of teachers was proportionately less than it was a decade ago. Now one great vice of trades unions is that they seek to force their services and their wage scales upon employers and thus, in a large degree, remove their members from the necessity of improving the quality and quantity of their work. This latter is the wholesome and legitimate means of advancement, and if solidarity reduces the force of this motive, it so far tends to degrade the vocation. There is no triter commonplace than that teaching ought to rank with the learned professions, but there are certainly now strong tendencies to make it a trade guild, the members of which organize for mutual support, defence, advancement, and the protection of the unfit, and by so doing, interfere with healthful selective influences which favor the survival of the best.

A pedagogue's position is unique. In his little domain he is monarch, wisest, best, and his authority is in many ways final, and by constant association with children he is liable to grow

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complacent even in ignorance, impatient of contradiction by his peers, and incapable of maintaining the eager receptive attitude of the student and learner towards his superiors. Incessantly teaching his little stock of prepared knowledge, weighed, measured, calibrated to the youthful mind, grown from long use second nature to him, but ever new to successive classes, knowing already all that he has to know to teach, he is liable to lose incentive to push on, to forget the sense of oppressive ignorance, which always spurs on the scholar, until his mind becomes indurated and essentially indocile. After a dozen annual repetitions of his work he grows suspicious of change, for this would involve new labor, other matter or methods, or both. It would involve a little sense of the fallibility of what he had done, and infallibility is too often the foible of the teacher temperament. He is strong in defense of his own possessions and has become thereby impotent to adopt others. Both ease, wont and routine slowly close in upon his soul and restrict the arrear of plasticity and vital growth. Once he was progressive, but he has stiffened in the mould. He is master of his own technique to such an extent that it has almost become busy work, and why should he change to new things when change involves both effort and uncertainty.

In the ideal teacher learning and giving out instruction ought to go hand in hand, and each is forever imperfect without the other, no matter how low the grade. But are teachers also students and are they not constantly prone to petty devices for reforms, and do not slight variations of their old ways seem to them revolutions?

There is a large body of text-books for every grade and department which are compilations perhaps of compilations, hovering in a kind of limbo half way between the childish comprehension and the original research of the great discoverer.

This body of knowledge is repeated in scores of tomes for generations. I have traced specific illustrations in rhetorics, geographies, English books, and even some scientific text-books, back through a dozen and sometimes nearly three dozen different authors. The writers of school text-books are a unique class of minds, hung like Mohammed's coffin between the heaven of pure science and the earth of infant minds, who have rarely studied the capacities, the nature or needs of childhood, and know little of the aspirations of the investigator who would add to the sum of human knowledge. This literature is too often the teacher's native breath and vital air. It is so copious that to know it well he has little time for anything else, and it is peculiarly calculated, with the small modicum of novelty in each author and text, to cause a sense of progress without its reality.

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How remote and belated some of our texts are is far better seen in some departments than in others. What do our school geographies suggest of the modern work of the great geographical investigators? What do most normal texts on methods and the mind of man know of modern studies in these fields? It has taken this country ten or fifteen years to move on from the effete principles of Sir William Hamilton to those only a few points less effete of Herbart, so that here the good average pedagogue is more than a generation behind.

Closely connected with these is the danger of arrested mental growth to which the teacher is peculiarly exposed. Medical journals are largely devoted to the practical application of the very latest researches of the pathological laboratory, which every active physician desires and needs to know and apply for all they are worth at once. Educational journals are largely devoted to making up real or supposed arrears in the teacher's education, news, gossip, or often trivialities and even platitudes.

How many teachers read above and how many actually below their own level? In this day of enormous publication, when it never came so near being a sin to read the second best in any field, how do teachers stand? Very suggestive here is the fact that most large cities and many small ones have medical and, perhaps, law libraries, supported by the professions, where the latest and best publications can be promptly seen in convenient rooms. Where can we find in this country such a teachers' library? When we look at the book shelves in the office of a superintendent, principal, or in the sanctum of a teacher, how few of the best, and how many books branded with the mark of mediocrity and commonplace do we find. In this respect only the clerical profession falls to anywhere near the level of that of the average teacher. Indeed, one would be only a little less surprised to find a clergyman reading and using the results of the higher criticism and the latest epigraphical and archæological research than to find the teacher knowing and profiting by the best educational studies or even the new practical departures in other lands. In every city there are young teachers who pass through a period when they are flushed with enthusiasm for better things, but they are too apt to find that this work does not pay, and too soon profit by the example of indifference set them by their elders and superiors.

It is the iron law of every vocation of life that only the minimal effort actually necessary is usually put forth, and that of teaching is sheltered, protected, its members kept complacently in countenance by their associates, so that the hot struggle for existence that marks the commercial, industrial and profes-

sional world is too often toned down to ineffective good wishes and ever procrastinating resolves for the future.

Another group of morbid pedagogic symptoms that we see oftener in this country than on the continent in Europe, is loss of the fine balance that should always be maintained between imparting knowledge to the children and getting it back from them. We too often tend to lapse to mere lesson setting and hearing. Just in proportion as a teacher is poorly equipped with knowledge, he or she tends to become a mere exactor of work, takes precious time to tell pupils what to do and testing to see if they have done it.

But this is not teaching, but a device of ignorance, of laziness, or of physical weakness, or all combined. The true teacher teaches and reduces recitation to a minimum. Whoever has visted the best continental schools, or studied comparatively such international educational expositions as those at St. Louis, must have been acutely impressed with the fact that we exhibit what the pupil does, Europe what the teacher does.

Here he says, "Go, do this and prove to me that you have done it." There he says, "Come, let us study together. I know and will inform, interest, and inspire you to go on." A little more pedagogic insight would make us ashamed of many of our wretched devices to conceal, excuse or dignify our ignorance or save ourselves from work. We say let the pupil find the facts or draw the inferences for himself and then he will be better able to investigate, will remember and prize his mental possessions more. No; we should have investigated and learned to impart. To allow or even encourage callow classes to debate, discuss and weigh evidence or regurgitate the matter of the text-book, may flatter the pupils by the subtle suggestion that they can form opinions that merit the name. Instead of exercising power by their crude thoughtlets, *bombinantes in vacuo*, they are inclined to the sweet delusion that their mental emptiness is filled, and so grow complacent with their ignorance, and perhaps opinionated.

Some teachers have come to fear that the pupil in the high school is actually in danger of accumulating a mass of undigested, unsystematized knowledge, and perhaps to fancy that this peril is awful and ever impending. But have any of you ever seen a dangerous mass of knowledge in any youthful mind, unless in the memory freak? And even then are we so oblivious to the laws of mental work and growth as to fancy that such a mass of erudition could exist in the mind without being assimilated in the child's manner, or that, even if it were a vast floating plankton, that our petty artificial devices of correlating, associating and linking its parts can have any other possible effect than to prevent it from sinking deep into the

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soul by keeping it on the surface against the day of examination?

The child learns to know not merely by doing, but also by hearing, and if the teacher's mind were charged to overflowing with knowledge in his own field, whether he had to tell it in the form of stories in the lower grades, or to give it in rudimentary conversational form in the higher grades, he ought to be the living text-book, known and read of every pupil, and not a mere taskmaster.

There are few more subtle balances than those between giving knowledge by and from the teacher, which is itself a passion and an inspiration, and the far lower but necessary work of finding by quizzes, recitations and examinations, whether it has found lodgment in the soul.

When mental progress is rapid, as in all great eras and epochs, content dominates form. This was true in the Renaissance, in Gothic art, in romanticism. Then comes a classic period when form and content are harmoniously welded. Later comes the stage when form dominates over content, method over matter. Thus we see that the great creative period of Jewish history ended in the wretched letter worship of the Kabbala and the Massoretic textualists. The Periclean age elapsed to that of the morosophs in the four great schools of copyists and commentators. The letter that kills takes the place of the spirit that gives life. Exactness, method, rule over matter and content. Sturm taught Latin so well that in a few years his pupils would have been at home had they been transported to ancient Rome. Now in a year and a half, four hours a week, we teach on the average less than four hundred Latin words, including those like *convenio*, to convene, *animal*, *imagino*, which carry their own English equivalents. Perhaps the most pestilent and subtle of all forms of pedagogic pathology is method cult which whips up two ounces of soap into a hogshead of foam, as a mediæval barber's apprentice must be able to do before he could become a master workman. As the principal of an Ohio normal school said, expertness in method makes knowledge less necessary. Instead of the thing itself it gives the explanation until the pupil is prompted to cry out, as a little girl did, "Oh, teacher, go on. I could understand everything you say a hundred times more if you only would n't stop to explain." Verbalism, technique, rules, definitions, notes, preciseness, accuracy,—these have their place, but very little of them for children. They give the conceit of knowledge without its substance. It is this that lies at the root of all the prejudice and suspicion, too often excessive, against normal schools and their work. It gives a tingling, then a corroding self-consciousness of every item of knowledge. It inflates facts instead of condensing them

as pedagogy should do. It makes the way of knowledge hard. It is a stone when the children cry for bread. It is the way of self-complacency and death and not the way of hunger, and a growing sense of ignorance which marks true growth in knowledge. It is a wind birth and not true parturition of the soul. It checks and blights curiosity, the divinest thing in the intellect. It brings a unique school-bred fatigue and smacks of the sad wisdom of senescence rather than of the eager hunger of young life for more and fuller knowledge.

Mass education or the grouping of children in grades, the accumulation of great numbers of them in school, the crowding of classrooms, the overgrown size of some institutions and even of colleges and universities, which makes against individuality, has brought with it a growing demand for uniformity.

This is indispensable where there must be more or less lock-step, and where classes must be trained in platoons and all personal ignorance ignored, and the efforts of education addressed to the average pupil. Association is necessary. Mass training is economic, and in a republic where all must be educated we must accept the inevitable with what complacency we can and make the best of it.

But we cannot forget that able boys are retarded, that the development in Europe during the last few years of schools for backward children, and now of schools for children with superior gifts, brings great relief and gain. The over methodic teacher probably tends to benefit most the lower half of the class.

A teacher full of knowledge and enthusiasm inevitably does best service for the upper half of the class. The aim should be to do the greatest good for the greatest amount of talent and ability, however distributed.

Along with this goes the calibration of knowledge into blocks, units, like bales of fodder; six weeks of this, twelve of that, forty lessons here, sixty there, so many times, weeks, years of preparation for college in each topic, so many experiments, uniformity of standards for promotion, for admission to college, etc. These shopworn and monotonous noetic goods, however they may appeal to girls, do not impress boys who desire something through which to vent their own individuality. Their passion is not to know the same thing that every one else knows only, but to know something that no one else knows. This is almost necessary as a sacred refuge of personality but the uniformitarians will none of it. Their methods certainly increase the ease of the teacher's work and his efficiency, but do they not obliterate something that is more valuable yet in the pupil? Must knowledge, in order to be taught to large numbers, be standardized like nails or flour, put up text-book packages, and weighed

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and sold over the counter like very dry goods? All this is magnificent in a way, but it is not education, which is made of other stuff.

The school is modeled on the home and should have both male and female teachers. There is very general agreement that female teachers should predominate for the young, perhaps, up to puberty.

There is much agreement, though less unanimity, that in the earliest teens, both boys and girls need as many male as female teachers, and there is much consensus of expert, though less of popular, opinion that in the college and university grades or wherever specialties are taught, this should be mainly done by men.

All over the world, however, educational systems are now being rapidly feminized. This process has gone much further in this country, however, than any other. One writer estimates that 92 per cent. of our boys and girls satisfy the provisions of the law and leave school forever without ever having come in contact with a male teacher. This is essentially wrong.

If the process of the last fifteen years goes on our public schools will be dames' schools. No one has occasion to raise here any of the questions of the feminist, nor should the problem be, as it is essentially, merely one of economy. Nature suggests the norm.

The father has his functions with the children quite as much as the mother, different though they are, and most students of this question believe that it is, in part at least, from this disturbance of balance that so many boys fall out of the last grammar grades and especially from the high school.

I shall not attempt here, to point out in detail, as I have sought to do elsewhere, the evils that seem to inhere in this tendency, but that it deserves to be enumerated among the pathological dangers of the times I cannot doubt.

Many of the above agencies tend to precocity. This is a danger which we see most often in the only children of parents who are exceptionally solicitous for their welfare. Now that we understand its meaning, we see, alas! too many signs of it on all hands. The city of itself hastens development so that the urban is a year or two in physical and mental development ahead of the rural child. It is ever harder for us in some respects to trust nature, but the school tends more and more to invade her domain and to control and prescribe so that the child does not live out to the full all the early stages of his development as he should, and therefore his maturity is not complete and all-sided. Some have thought the school, at its best, was liable to be pernicious before the age of twelve, but the growing of modern civilization sufficiently negates this view. In this country,

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however, life is harder upon youth than any other the world has known. We are unhistoric in our very mode of thought as well as in our origin. Our history does not invite to linger on the records of centuries or rich mythic story which is so germane to the soul of youth. The present absorbs and dominates everything, and our young people can hardly wait to get into active life. Nothing is esotoric or reserved for maturity or old age. The bloom is rubbed off the naïve before it is time, and positions are sought and attained before full maturity has brought strength and ripeness for efficiency in them.

We are just beginning to learn that the nature of childhood must be studied and followed, or else we are liable to do harm as well as good, that the ways of the young are very different from those of the old.

Just in proportion as this is coming to be understood we are slowly reconstructing, with the addition of many genetic elements, the methods and matter of grammar and even high school teaching, and recognizing in greater or less degree the all dominant fact that the child does, and forever must, repeat the history of the race.

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A CENTRAL PEDAGOGICAL LIBRARY AND MUSEUM FOR MASSACHUSETTS.[1]

By G. Stanley Hall.

During the last few decades educational literature has not only increased enormously in volume, but the best of it has grown special and even scientific to a degree unsuspected by the public, by the average teacher, or perhaps even by most librarians. While much of the teeming product of the pedagogical press, present as well as past, is smitten with the blight of the commonplace so that it relaxes mental tone to read it, there has lately arisen a choice body of expert journals, books and monographs that tend to lift the vocation of teaching to a higher level, that has gone beyond early authorities, erected new standards and made much, that was once helpful, obsolete. Scores of academic chairs in pedagogy have been established, laborious and costly researches undertaken, reforms that have absorbed years of the best work of select intelligences at home and abroad have been accomplished, and others are under way. Opinions have been collected over wide areas. Anthropology, hygiene, psychology, sociology, architecture, legislation, finance have often brought the best that was in them to bear. Experiments costing much time, money and labor, and made on precious human material, have, some of them, settled great questions and so are worth all they cost. Thus while the old and new, conservatism and progress, good and bad, are always found in every department of life, as is needful for healthful growth, the distance between these extremes has possibly never been so great, and the worth difference, measured even in dollars, between the best and the average books, buildings, laws, methods and teachers, never so great. Hence the problem, how to make the best known and prevail so as to work against the iron law that makes everything, everywhere and always in the sphere of education, tend to degenerate to apathy, mechanism and dull routine, is vital for the rising generation, and posterity will judge ours according as we rise to this great opportunity or fall below it.

Nowhere is this problem more vital than in this State, which has long led the new world in education, and does so still in the

[1] Address before the New England Library Association, May, 1905.

number of institutions and average pay, but is now, by general consent of the competent, being steadily outstripped in most respects by the more progressive communities of the middle west. Something needs to be done in this State besides recounting triumphs of the past, devising cunning comparative statistics, pointing with pride to buildings, paper schemelets and the pedagogical apologetics now too much in vogue. Something qualitative, new and effective is needed if we are to regain our lapsing prestige in public school work. A central library and museum is one opportunity now open to us which would help the State to regain its lost leadership. Let me first hastily sketch the ideal form of such an institution.

Rooms conveniently accessible and attractive should first be secured where Boston teachers can meet socially upon school holidays and after hours, where appointments can be made and special committees meet. I will not call it a pedagogical club house, but the need of some such opportunities as a club affords has often been expressed. But the chief feature should not be the buildings or rooms, but their contents. Here should gradually be gathered a professional library and here should be found the best educational journals, American and foreign, and the choicest vocational books. I say the best, because teachers in this country are in a special need of sedulous protection from the invasion of the flood of second, third and tenth best. Those who wish to see the plans and the furniture of the best kindergarten rooms in this and other lands, or of the best American and foreign grammar and secondary buildings, with cost per cubic foot, provisions for light, heating, ventilation, coats, hats, umbrellas, toilet, desks, blackboards, yards, roof, playgrounds, modern rural schools and grounds, should find this material gathered, classified and labelled in convenient form, as expert library art can now do, so that the visitor can speedily compare the best in different towns and countries. We began this work years ago at Worcester and went far enough to find that by excisions from university reports, by correspondence, domestic and foreign, it was entirely practicable to gather and group, at trifling cost, valuable data, the chief requisite being the service of a vigorous, competent and young assistant. School architecture is slowly becoming a specialty, and here it could not only be helped along, but the level of lay intelligence elevated. Many expensive new buildings might have been greatly improved and their expense reduced by knowledge thus gathered. From this collection I would exclude models, but not working plans.

School hygiene should be represented by the best apparatus for testing moisture, pressure, regulating temperature and the amount of carbon dioxide, determining the intensity of light on

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desks in different parts of the room. Here the simple apparatus used in testing eye, ear, throat, lungs, the various curvatures, the simplest kit of the school doctor, now standardized in several European lands;— all this should be acccessible and explained to those interested, with stated demonstrations of the instruments themselves with the aid of models, cuts and diagrams. The choice little list of books and journals solely devoted to this vital aspect of school work should be grouped, and even important articles catalogued, so that a teacher who wishes either to provide additional safeguards for her own health, or that of her pupils, would find the data at hand, or if a paper was to be prepared at short notice, it should not merely repeat platitudes, but diffuse real knowledge.

Child study has many aspects, the value of some of which is now universally recognized and taught in every normal school and often in the university. This already has its little body of literature, good, indifferent and worthless, and the best is a small but precious list of both books and journals that should be gathered and catalogued by subject. Some of its apparatus and methods should be seen by every teacher and be accessible in every school, and all should be loanable for long or shorter times. Here should be exposed to view the specimen life and health books coming into use in certain European cities, and used often as a new basis of promotion as well as of individual treatment. Everything indicates that this line of work is seen to be more basal for all lines of educational endeavor, and it is in great need of some adequate material installation.

Charts and illustrative apparatus should be another department. Nothing surprises the average American teacher more than to see the wealth of diagrams and devices used in teaching in the best European schools. Our buildings often seem beautiful bodies, but these are in some sense the soul of school buildings and rooms, without which they are beautiful but lifeless things. Wall cuts of steam engines, mechanism of balloons, scientific kites and tops, illustrating all the principles of physics; devices for making geography, geology, botany and zoölogy clear and simple; historic tables for illustrations for culture stages from savagery up;—always the central topic selected, the cardinal features brought into relief, details neglected or subordinated. We do not begin to understand what pictures can do and are doing in easing and short-circuiting the ways of ingress into youthful minds, and giving body and content to teaching, which is always prone to lapse to formality. Maps, curves, colored schemes, the devices of the graphic method seen, *e. g.*, in the census, are almost a new language. Add to these the scientific toys of Germany, some of which are masterpieces of the simplification of mechanical principles, and

are also models of cheapness and of the pedagogic art that taps vital interests. The Russian, French and Belgian pedagogical museums have rooms full of these devices, and some are duplicated many fold and loaned far and near. I wish there were time to dwell upon the manifold activities of these institutions, the thousands of lantern slides, of geographic, zoölogical, historical illustrations, diagrammatic and typical schematizations of principles, facts, periods, photographs of works of art, sometimes demonstrations of material and their use, popular lectures, and sometimes model classroom exercises conducted for a chosen few.

There should also be a collection of text-books on each school topic from the primer up, new and old, always including representative books from foreign lands. To my mind the best thing of all the St. Louis educational exposition was the German text and reference books for teachers and pupils. Among these masterpieces of their kind I spent many days. This collection, not large, should have stayed in this country, been provided with a home and made a valuable nucleus. Our publishers and text-book writers very rarely compare methods of other lands but focus all their efforts on the points likely to weigh with non-expert text-book committees against the books of rival firms. I have heard of a country judge who, as he grew old, refused to hear the other side of a case lest it should confuse his mind. So these textigraphers decline to consider foreign methods because so different. The trouble with most American text-books, even those by college professors, is that they are written with very inadequate knowledge of the best pedagogic achievements of others; the author has made no comprehensive preliminary survey, largely because the material to do so has not been available.

Once more, most governments publish valuable reports annual, triennial or quinquennial, perhaps blue books giving the history and present state of great reforms like the new school board in London, the twenty years' celebration of the courses of citizenship and morals in France, the marvellous story of recent indigenous education in India, and of the school system, pronounced the best on paper, England has produced—that of Madagascar,—documents as important for other lands as Dr. Harris's report is for ours. The proceedings of congresses, of experts in special educational topics, accounts of new departures in industrial education, elaborate illustrated descriptions of new institutions, the exposition books;—all these should be collected by some one who is long-sighted enough to see what is going on in other lands.

Such an institution should give aid at a distance. Some years ago I destroyed hundreds of letters of inquiry on peda-

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gogical matters, most of which I was unable to answer, but where it would have been very easy, with time and assistance, to have rendered service. There were letters of inquiry about pedagogical literature of almost every kind. Requests for references, I think, led all others. Had this or that ever been tried, and, if so, where and with what success; how can I learn about the new Scotch law, the German classical discussion since the Kaiser's Rescript in 1892, school gardens in France, the higher commercial schools of Germany, the *Ecole du Livre* in Paris, the summary of the discussion on teaching arithmetic as ratio, reading machines, maps and charts of Bible study, the new moral and religious training methods in France, the new London board law, music in schools, a list of cities that have adopted small boards, the constitution of school boards in foreign cities; what are they doing in education in Argentina; something about the College of Preceptors; the best journal on school hygiene; what about schools for dullards, the doll congresses, the new London University, and the best school for my peculiar child; what is the Batavia system and is it unique; some literature on myopia in school children, or on tests and measurements, etc. Besides those who write many visit our library and consult its head. Now a competent librarian, specialized in pedagogy, could easily conduct a bureau of information and do consultation service personally and by correspondence, such as Mr. S. S. Green has for years done in a broader but less specialized field. This alone would widen the sphere of usefulness of such an institution and extend it to the whole State and beyond. My experience has almost led me to believe that a gifted, trained librarian in pedagogy could do a wide service, possibly greater than any other single person in the whole field of education is able to render.

This is the ideal in outline, or, at least, a segment of it. It would, of course, take years to realize and would have to be approximated gradually. Where and how to begin would depend upon many conditions. Let me briefly consider objections either actual or possible.

I. This need is already met. All who know the field know this is not true. Neither Harvard, the Boston Public, State Library, ours at Clark, the Congressional, or Library of the Bureau of Education, contain even most of the best of the books and journals. In all these places only a small fraction of the library resources can be devoted to this subject, and little expert knowledge is exercised even in selecting, and still less in making acquisitions available. Educational literature grows old and most of the contents of the alcoves in this field in the older libraries is of no value save for history. A few monumental works have outlasted their generation, but the rest are

now obsolete and dreary, and yet it is not more, but, above all, better literature, chosen from a wider point of view, that is wanted.

II. The second objection sometimes made is that such an experiment has been already tried and failed, but the two tentative efforts made in this direction in Boston years ago were both triply doomed to failure in advance, so ill chosen were the plane, plan and the man. The right selection of the latter is, of course, the most important of all. He must be familiar with, at least, French and German, be an expert in pedagogy and in knowledge of libraries. He should be a person with a distinct genius for just this work, adaptable, sympathetic, eager for the best, sympathetic with the new and the old, and young enough to think at least as much about the future as of the past.

III. The third objection is that teachers do not want and would not use such an institution. This, of course, cannot be fully known until the experiment is tried. Boston teachers are cloyed and hide-bound by opportunities for all sorts of culture,— so far more than they can absorb. They hear and attend all sorts of things, new and old, good and otherwise. They are distracted and have acquired a strange faculty of hearing every novelty, but of developing a strange immunity against infection in practice. The receptive and the effective halves of their soul are strangely divorced. The consensus of the older, dominant members of the guild is against new departures. If such an institution as I have so roughly sketched were to be given by Carnegie or to arise by magic over night, something like this would probably happen. All teachers would, of course, flock to see it, and the Boston guild would first ask Harvard its opinion and it would consult its interests. If they conferred with the leading members of your association I fancy the answer would be even more doubtful or adverse. Left to themselves the older teachers would find in such an establishment so much that would be confusing and at variance with their well-settled and habitual ideas that it would soon cause a somewhat troubled state of mind. It would probably, however, be commended with judicious and qualified terms of praise, tempered with many an "if," "but," and "perhaps," and rarely visited. A younger, ambitious, and progressive minority would soon find ready aid here for practical needs of their work, suggestions and aperçus that would give them more respect for their profession, perhaps convince a few that they could make it a permanent career. The papers and discussions by those who knew how to use its resources would grow meaty. Slowly new leaders would emerge from the average. Now and then a few would spend a summer in Europe following up

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cues found here, and one or two would later take a year off and come home with a new repertory of ideas. Certain schoolrooms or departments in the city would slowly begin to stand out as superior, somewhat according as they had made connections with the new resources here opened. In time, one or two old leaders would recall with joy that they had praised the new departure at the outset and would do so with more effusion in the wondrous and benign light of the growing knowledge of success, would fancy they had foreseen at the moment of inception that an important epoch was being marked, and a surviving member or two of the State Board of the new Boston committee of five would feel the *juvabit meminisse* that the foundations of such an institution had made the day of their tenure of office illustrious.

But, jesting aside, who should take the initiative and found and support the institution? The head of a great library cannot do it for want of time, room, money, and expert knowledge. It should be a separate establishment. The teachers might do it. Lawyers and doctors have professional libraries of their own in many cities, often excellent, well supported and patronized. By this they effectively document the professional nature of their calling. Teaching, of course, should be a profession, but, measured by this standard, is not yet one. Moreover, teachers are not used to doing things for themselves. Like clergymen and all salaried classes, they wait for things to be done for them. Again, the city might do it, and possibly the new Boston board may take a large enough view of their calling to be interested. But cities usually respond to pressure and this will not arise. The same is true of the State. Legislators are more and more passive, following the lines of least resistance and most pressure, and are less and less likely, or even able, to take the initiative in statesmanship of which educational policies are the culmination. From the advisers of the legislature nothing but sage scruples and technical objections, bandying of responsibility, and voicing of average apathy and opinion are to be expected. To urge the opportunity of a great new step at the State House would, under present conditions, be useless. To undertake such an establishment in the wrong way, or to begin it too tentatively, timidly or feebly would be far worse than nothing, because it would be foredoomed at the start to failure, which would make later successes harder. Thus the only remaining hope for this State is in some rich man advised by a wise one, and here, after cherishing this ideal for years, I am beginning to fancy, although with no definite expectation, that I see a faint ray of hope. If this fails, I believe with complete assurance, with no shadow of doubt, that some such institution is certain to come, but that we in this State must resign ourselves to see it arise farther west.

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CITIZENS' INITIATIVE AS A FACTOR IN EDUCATIONAL PROGRESS.[1]

By G. Stanley Hall.

While improvements in school systems may be begun at many points, the greatest need, as well as the chief leverage, is to begin with the school boards. The last twelve or fifteen years have witnessed, in this country, a new movement to reduce their size. To select twenty representative cities, the following, have nine members on the Board: Springfield, Los Angeles, Duluth, Baltimore. St. Paul, Cleveland, Memphis and Washington have seven. Kansas City and Denver have six each. Five are found in Buffalo, Toledo, Rochester, Indianapolis, Minneapolis, New Haven and now Boston. San Francisco has four, while Albany and all the cities of the second class in the State of New York have only three. Of these twenty, I have visited all but four since their reform, and have been impressed both with their general excellence, for no other twenty could be selected that are on the whole so good, and with the uniform testimony to great improvement due to reconstruction. My correspondents in these twenty cities assure me that no breath of scandal has arisen under the new system, and I am told that there is no system in the country that has enlarged its Board within a decade. This movement is spreading rapidly, and has already reached several score cities besides the above, while similar changes are under discussion in many, if not most, cities that retain the old system. Worcester's Board of twenty-four is already among the largest in the country for the size of the city.

Without exception, so far as I know, the reform has been initiated from outside the school system. It is generally a citizens' movement, and has usually been adopted only after a vigorous struggle with the representatives of the old order. Everywhere there have been the same objections, and everywhere the same triumphant answers to them.

I. The reduction in the size of the Board is called antidemocratic and the idea of many honest, well-meaning citizens is that a large Board is more like the old-fashioned town meeting and that to concentrate so much authority in a very few hands

[1]Address before the Citizens' Educational Society, Worcester, Mass., May, 1905.

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seems at first a risky step. The answer to this argument, which is overwhelming, is that, if only representative men could discuss and settle all school questions in public, the larger the body the better, but large Boards everywhere break up into small committees. Boston had 29; Worcester has 11; Philadelphia had 37. No superintendent, no citizen, and even no reporter, can attend all these meetings, so they are usually in effect secret. And yet, in them all, important business is arranged, questions settled, plans matured; all trades and adjustments are pre-determined. Hence it comes that in the general meetings there is little to do but to take and record votes (I know of one single meeting in which over seventy votes were passed, after which a member told me that he knew the merits of only four questions, as that was all his committee contributed), and to talk for the benefit of the press, the constituents and the public generally; so that the true motives of measures are rarely apparent. In view of the vast sums of money expended annually for buildings, text-books, etc., and the ease with which jobbery and even corruption can be covered and individual responsibility evaded, there is constant temptation to crookedness. Thus the large Board in its actual operations is anti-democratic, and its real operations tend to become of the star chamber order.

Moreover, politics always tends to creep in. There is a general consensus that the last few decades have witnessed a general deterioration in the quality of members of the American school boards. More of them are unknown to the voters outside their own ward. It is the first step toward a political career and these little committees are particularly prone to patch and hack at old rules and multiply new ones, so that now the body of enactments governing many of our city schools under the old system, instead of being plain and simple, sometimes comprises from one to three hundred pages of printed matter and presents ambiguities even if not inconsistently hard for a lawyer to master. Under the new system committees entirely cease and everything goes before the full Board, or there are a very few committees, where everything is open. Thus it is really the old system that is radically and essentially anti-democratic.

Again, it is objected that all parties and creeds should have proportionate representation, and that the new Boards fail to secure this. This argument has great weight with partisans and religionists, but it is, if possible, more shallow and absurd than the other, for many of these new small Boards by distinct enactment must consist of representatives of each leading party and creed. San Francisco, with its Board of four, specifies that only two shall be of any one party; New Haven, with its

Board of seven, specifies that not over four shall belong to the same party; and elsewhere provision is made for securing proportionate representation of Protestants and Catholics. For myself, I would go still farther, and welcome the best men, whatever their convictions. I am a Protestant and a republican, but I would prefer to send my children to a school where all the Board were Catholics or democrats, or both, if they were the best members of these persuasions, than where they were all of my own creed and politics but the worst, or even the average representatives. Many cities have risen above these questions, and are content with the best men.

II. Effective as a reduction in size has everywhere proven, it is not enough. The superintendent must be given more power in all purely educational matters. Education is now a profession, represented by chairs in most universities and by numerous and very expensive normal schools and colleges. The superintendent should be recognized as an expert, and instead of having all his duties minutely defined and prescribed, he should be free to use all his knowledge and ability for the good of the community. To do this he must first control the appointment and removal of teachers. It is hard for the great public to learn the vast difference between good and poor teachers or to understand how the quality of the teaching corps tends to distinctly deteriorate when this initiative is in the hands of the Board. A generation ago the Boards examined even graduating classes at normal schools, and gave or withheld diplomas accordingly. The best and not the worst teachers were selected for home consumption. I know there have been superintendents who illustrate the adage, "He who depends, defends," and have upheld a usage which took from them all responsibility of appointment. It is superintendents from these new cities that have this power that are now choosing and taking away the best teachers from the schools under the old system, where it is far easier to drop a good teacher who depends upon merit for his or her place, than a poor one who cultivates "pull." Those who are inwardly conscious of their own weakness often devote themselves to cultivating influence, until it becomes almost an impossibility to drop the worst, while the best are ever harder to keep. No wonder the best superintendents gravitate to cities where they can choose their own teachers, selecting the best wherever they are to be found.

Again, the superintendent should determine not only the courses of study but the text-books. There are vast differences between good and bad ones. Some are expressly made according to an elaborate receipt designed to make them sell to the ignorant, and sometimes venial, text-book committees. More-

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over, there is an innate contradiction in giving the superintendent the power to arrange the course of study and withholding the power of selecting all text-books. In some subjects the worst text can be bad beyond the power of description, while others open up topics easily and naturally, and make for mental economy and progress up to the grades, and bring out all the powers of the teacher and the pupil.

To this end, the superintendent should be selected with great care, for here, too, quality differs vastly, should be given a generous term, and also freed from the duty of educating new members of the Board each year, attending committee meetings, sitting on the anxious seat, and feeling himself essentially a servant liable, at least annually, to be discharged with or without cause.

III. A third reform, which has often—not always—gone with the preceding, but always should, is the separation of the business from the professional management of the schools. The erection of buildings, all changes in them, or grounds, the purchase of supplies, etc., should be in the hands of a trained business man, who should be on terms of friendly co-operation with the superintendent, but accountable to the Board. Various devices have been adopted to secure the management of school business upon the same principles which are recognized in private business. I have visited various cities where, within a decade or less, a judicious system of locations for new buildings, and a sensible plan of their construction, a great improvement on preceding schemes, has also resulted in very great economy. Sometimes where members of the Board undertake this work, they receive a salary. This has given rise to the objection that the new system is expensive. The contrary, however, is the case. The city of Rochester, which has now an admirable system, actually turned back into the treasury the first year after the new scheme went into operation, $81,000. While such a per cent. of saving is exceptional, increased economy is the rule. Even in those cases where the budget is not reduced, far better service of every kind is obtained for the money. And this is true economy. It is precisely here that, in some cities, the rub has come, for this involves the abolition of favoritism, jobbery, and pulls, in all the matters involving contracts for material and labor, and secures the holding of each contractor and workman to his work by daily and detailed supervision. The difference between the methods of constructing schools and constructing dwellings and business houses, by those who own and occupy them, is great.

IV. Another reform that has often been found very helpful is a special election for the school board; sometimes a separate day, and sometimes only another polling place near by, or per-

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haps in the same room but under independent control. This factor seems to work well, but has hardly been tried sufficiently yet to reveal all its possibilities. Every degree of separation in space or in time tends to divorce education from politics and bring to the polls those most interested in school matters. In some communities women are allowed to vote for school officers, and so far this seems to have worked well. A separate election, however, such as now prevails in Indianapolis, Colorado, and elsewhere, is at least a promising experiment.

Closely connected with this is the separation of the school board from the city government. Where educational matters are controlled by one body and the financial support of schools by another, all kinds of friction and even abuse creep in: as in a large city recently, where school supplies were diverted by the council and instead of shortening the school year, as has sometimes been done, children were massed sixty in a room and many teachers released early in the year in order to avoid a deficit.

Now no one of these improvements is sufficient of itself to insure real effectiveness, for great is the influence of lust of office and power, and often of spoils. There is no more clear and certain lesson from the whole history of education than that it always and everywhere tends by an iron law to degenerate in quality. I cannot think of a single great reform that has ever been effected where the initiative and the carrying out of it sprang from within the system itself. The great reformers have for the most part been philanthropists, patriots, or at any rate, not plain teachers by vocation. Thus such a function as your body seeks to exercise is essential. There are American cities to-day in which the Woman's Clubs have abandoned every other function except that of improving the public schools, and in some cases they have effected very great and beneficent changes:— introduced the kindergarten; broadened the scope of manual and industrial training; improved the grounds; decorated the walls of the schoolrooms with works of art, sometimes quite costly; secured the nomination of good men or women on the Board; improved hygienic arrangements; aroused public sentiment; rallied and organized the parents to meet weekly or monthly in every school building; improved evening schools; introduced nature study, etc.

These methods are all in the direction of simplification and increased directness. Everything is open to the public and to the press. It is the introduction of plain business common sense, and wherever introduced, has behind it the intelligence of the community and arouses local pride and new public interest in the school. It is supported by every argument that is slowly working out municipal reforms in cities like St. Louis, Chicago and Philadelphia. It always brings excellent, if not the very

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best, talent and experience in the community into the service of the schools, and is certain to prevail just as soon as parents understand their own interests and those of their children.

Finally, the best answer to the question, what your society can do, is found in the statement of what other societies have done. Some of them have committees on the work of similar societies elsewhere, to bring before the members promptly knowledge of every new departure. Perhaps they send delegates to visit these societies and to attend and report their meetings. Some of them have central meetings to compare notes with delegates from other similar societies. What has been accomplished in Brookline, Brooklyn, Philadelphia and elsewhere is certainly surprising. Again, lecture committees provide courses each season, sometimes by specialists in education and science, art, etc., and sometimes lectures with the stereopticon for school children. Others have committees on the relations of the work of the society to the community, whose duty it is to interest the press and supply them with information and to canvass for membership. Others have playground committees that consider the needs of municipal gymnasia, improve, enlarge or extend facilities for playing in the school grounds, and on roofs, erect sheds for gymnastics in bad weather, etc. Art committees do several different things in different places. They collect pictures, photographs, mount and group them, cutting from weeklies and monthlies, for which they advertise, and arrange them so as to illustrate themes in history, art, nature study, literature, biography, geology, botany, etc. Sometimes these portfolios are circulated in the children's reading room of the library, and teachers can indicate the class of pictures they desire. I have seen one school that, as a result of some years of work by teachers and friends, had, I should say, six or eight thousand pictures, arranged to supplement the work of the school. Again, art committees solicit subscriptions for pictures, photographs, prints, drawings and statuary for the schoolrooms. Even loan exhibitions have been conducted by these committees for the benefit of the schools and perhaps in the high school hall. A permanent museum of industrial art or children's productions on paper and wood, etc., has been established in at least one city. History committees devise means for interesting both parents and pupils in local history, and perhaps print pamphlets outlining the history of the town and its vicinity and suggesting historic excursions, collecting slides, and sometimes even new material has been gathered, old sites marked and literature listed. This has stimulated local pride. Science committees suggest topics, often of local interest,—water sheds, native flowers, birds, trees, animals; study the telephone, fire, electric car service, ventilation, hygiene or astronomy; print charts of local

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objects of scientific interest; collect scientific toys and pictures; conduct popular lectures with experiments; and have also occasionally contributed apparatus. Physical and manual training committees have investigated conditions in schoolrooms, interested physicians to gather data, made recommendations for hygienic improvements, reports on the state of athletics, brought experts to lecture on manual training, and gathered educational suggestions for such courses from the people and the industries of the town, etc. Other committees have devoted themselves to the study and help of boys' clubs and perhaps started new ones, assisting them in the way of procuring quarters and in useful expenditures of their energies in debate, etc. Mothers' meetings have been arranged in the schoolroom where teachers and others were present, and practical topics like children's dress, lunches, home duties, toilet, health, etc., were discussed. Occasionally special studies of children have been instigated by these committees.

I find that there have been committees or lectures or courses under their auspices on the reading of children, home study, recreation, music, the relations to the public library, story-telling, the flora and the fauna of the region, etc. The object throughout is to bring the parents and the school and teachers nearer together, to create intelligent interest in the welfare of the school, to inform the public as to present theories and practices and thus create a sound public opinion. Social meetings are often held. The essential feature of these associations always is work, which is largely done by standing committees continued from year to year for specific ends.

If this society is to accomplish results, it seems to me it should address itself to a definite programme of work, with definite goals. Merely to edify and instruct each other, or even to inform the community is well, but I think the programme of all other societies of this kind, that I know, is more definite and involves much more work. But it must not be forgotten that your work is just beginning. Your ends and purposes are the best things in the field of public education that have come to this city since my residence here. May you have the wisdom and energy in the face of the great work before you, so sorely needed here, to push on to complete success.

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THE EFFICIENCY OF THE RELIGIOUS WORK OF THE YOUNG MEN'S CHRISTIAN ASSOCIATION.[1]

By G. Stanley Hall.

Nearly twenty-five years ago a school superintendent in one of the largest eastern cities said at a teachers' meeting that after some twenty years in office his system, while, of course, not absolutely perfect, was now so near it that he was disposed to challenge any one to point out a real defect or essential improvement needed in it. Then several of his principals and friends arose in turn, praised him and modestly praised each other and themselves, contrasted the present with the past to show the marvellous recent progress. I had spent a week inspecting their schools and when asked for my word was young, foolish and conceited enough to suggest a few respects in which I thought we might profit from European schools which I had just visited, and even added that sometimes those who thought themselves already perfect never became so, that all things human that ceased to advance had already begun to decline. During the next forty minutes I learned very fast and much;—that no outsider could really learn anything about their work in a week that could count against those who had spent their life at it; that I was in danger of being counted an enemy to education; that it was perilous to criticise the public schools in public because their efficiency depended upon the good will and support of tax payers; that our school system was the biggest in the world; was American and *sui generis;* was already in advance of Europe from which it had nothing more to learn; that psychology was an academic thing and had no practical lessons for pedagogy.

This experience may in part explain my reluctance, which Mr. Pierce will remember, to accept the invitation with which I was honored, and in the free criticism which I shall make bold to offer, it helps to fill the background of my mind with doubts and diffidence about the validity of it all. Lotze said that to be praised in good taste just to the saturation point is the most exquisite sensation life can afford but also one of the most dangerous. You deserve so much that perhaps you have had too much and want and need a change by way of a new sen-

[1]Address before the International Meeting of the Y. M. C. A., at Niagara Falls, May, 1905.

sation for very surfeit. This magnificent new step in trying to see yourselves as others see you by inviting outside but friendly men to suggest and even criticise, should mark an epoch and set an example for other organizations both religious and secular. To-day, at least, you do not seek eulogy or advertisement of your merits but your purpose is more akin to that of the great manufacturing plants which occasionally invite university experts in chemistry and physics to look over their processes and machinery to see if from their different standpoint they can suggest modifications that would make for greater economy and efficiency. So queerly perverse is human nature that, just as when asked to praise as above I felt impelled to blame, now the very candor of your request tends to disarm criticism and win the good will that would prefer to lavish praise till, however voracious your appetite might be, you would be sated and cloyed.

I love and honor this association because it marked practically the first recognition in Christendom of the true meaning and value of youth. In every known race and nation, religion is brought home to young people in the teens by formal initiation ceremonies, confirmation rites and conversion, which is most frequent at that age. Your work begins at the pubertal epoch when religion is rather suddenly and, more than at any other time of life needed against the flood of new temptations that now beset the young man, and when true piety can be purest and deepest. To this age Jesus stands closest and appeals most strongly. He comes to young men as to no others. His message of love to God and man gives the strongest passion in the soul, the one most prone to grovel, its most worthy object. Women, childhood and old age are by nature a little less near to him. Boyhood has not yet attained, so do not let down your age limit too low. Old age is conservative, unprogressive, so keep your membership young, for youth is the light, soul and hope of the world.

The inception of your association marked a momentous new step and it has inspired and set fashions for many more which, though called by other names, are really your children. Indeed, your founders perhaps builded more wisely than they knew, and science has lately been enriched by confirmations of their discovery that adolescence and Jesus are each the key to and the revealer of the true nature of the other. I knew and worked a little with MacBirney in his prime, when the pure culture of personal piety was relatively a far larger part of your activities than it is now. You should not let the strong, short circuit current between the individual soul and Jesus be weakened by the multiplication of long circuit activities. My inquiries show that you give now relatively less time and energy

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than formerly to the study of the scriptures, to hymns, to cultivating private relation and communion with God as your social efficiency increases. Do not lapse to an ethical club nor to an association for philanthropic work only with young men, excellent as this is.

I. This brings me to my first point,—Bible study. I have collected and spent much time in perusing your text-books on the scriptures, and while they differ much in merit—and some I should fear might actually impair interest—I have found none that seemed to me up to the standards in either pedagogic methods or modern scholarship. The most obvious parables are sometimes tediously explained. In one, miracles were all treated by the same monotonous rubrics,—time, place, circumstances, manner, words, effect on the object of it, on Jesus, on the disciples, and on the multitude. Cross references are adduced to show that a miracle means a wondrous, mighty work; that the people marvelled and were amazed. One gives a page each to each of the seven days of twenty-six weeks, 132 in all.

The appeal to the devotional interest is incessant. Written prayers are inserted which it is stated, are "not necessarily connected with the subject of the day's study." "What did he say next?" "Who came?" "How many times is the word 'straightway' used?" "What is the meaning of 'beside himself,' 'laid hold of him,' 'friends?'" "Who was Jesus' mother?" "What was Simon's other name?" are fair samples taken at random. Sometimes the answers are printed after the question, and for some the pupil has but to glance at the Bible before him. One text-book of a very different kind always leads up to personal questions each of which must be prayed over and answered in writing, such as "Am I a saving force?" "Do I love my enemies?" "Is my eye single?" "Have I lost my life for Christ?" "How did Jesus dress, and how do I?" "Am I ready?" "Do I follow afar?" "What do I lack?" "What is my answer to the question 'Lovest thou me?'" In another book of thirty lessons for thirty weeks the air is freer and the poetic and other quotations better, the sentiment broader and deeper and more wholesome, there are more indications of scholarship and less that is trivial and commonplace; but the focal questions are such as "What is discipleship?" "What kind of a son ought a father like God to have?" "Summarize the evidences that Jesus was interested in man." I wonder if Jesus would have taught in this way or does this suggest the pedagogy of scribes and Pharisees or the worst busy work traditions of the uniform lesson age of the Sabbath school now happily improving?

In this work, I think that every one familiar with the principles of modern education would say that, first, the intellectual side

should be made more meaty and deal with more essential and less incidental matters. The view should be broader and more conspective and perspective. An apparatus of maps, large and small, showing travels, historic ages, tables of dates, rulers, contemporary events, genealogies, photographs of travel, excavations, especially the many free reconstructions which go beyond literal scholarship, and perhaps sacrifice some of its ideals a little for edification, a choice little religious library of a few of the best lives of Christ from different points of view, a good harmony, Bible dictionary, perhaps the polychrome Bible, and some one to demonstrate this material and bring in occasionally a large general atmosphere of scholarship and protect youth from the deluge of second and third best literature with which the deluge of printer's ink now threatens to overwhelm the world, despite the bow of promise set in the heavens of old; —these are now perfectly feasible and could be curriculized into unity. Secondly, while youth normally resents direct invasion into the aditum of its sacred religious life and feeling, it craves indirect and suggestive help. Therefore, without entirely abandoning the aggressive personal method of the revivalist, which often does great good, I would add the æsthetic, indirect appeal of Christian art with its boundless wealth of photographs of masterpieces. Almost from the Christian era to recent times the Bible is near the centre or art history. There are a few pictures of Jesus' face that cost from one cent to one dollar and that appeal to some youth as no sermon can. Their moral strikes in of itself while all attempts to rub it in would fail. The Passion Play, Parsifal, Ben Hur, oratorios, other good sacred music, poetry and hymns, would help us to reach the very highest in the intellect and the deepest in the heart, which we must do to transform life. We want neither the higher criticism nor the details and minute exactness of the professor's erudition to teach the main springs of edification. We do now know enough of the nature of youth, of the modes of reaching it and the materials are at hand, so that we only need a wise purveyor who can command these new resources. If we would systematically abandon the worst literature now in the field and progressively cultivate something new and better, the Bible work of the association would languish less.

II. Later, in the closest and most vital relation to this should come teaching in morals. Once this was thought unnecessary, and Mark Hopkins was told by his predecessor that ethics was a form of paganism needless now that saving grace could do its work quicker and better. I am not pleading for academic ethics. When, after the war of 1870, education was laicized in France, it was found that children were growing up without

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knowledge enough of the Bible to understand common literary allusions, just as half a dozen censuses show, is progressively the case now in this country where, on the whole, despite all our efforts, the children in grammar and high schools know less and less of the Bible. Therefore, the French government provided that ethics should be taught concretely by massing examples of heroic deeds in history and literature, by proverbs, maxims, civic and patriotic precepts, and by appeals to the sentiment of honor which, although so often perverted, is perhaps on the whole, the very strongest of all the bases of moral appeal in the young. Desjardins, Lavisse, and others took the movement into the university on the basis of a few fundamental principles which all could accept. I wish there were time to describe here the results of that work as set forth in the celebration of its twentieth anniversary just held. In England, and in this country Gould, Sheldon, Hyde, Sutherland and others have suggested what may be done along these and different lines, and there are already spasmodic illustrations of new and better things. Some begin with body keeping and tap the ever gushing springs of athletic interest. Dr. Seerley, of Springfield, confers personally with all who wish it, as nearly every young man does, concerning sex, and sometimes, gleaning in the wake of a powerful revival, saves souls it left untouched. Between love, procreation and religion God and nature have established the closest bonds, and, in my experience, and observation there is no topic in the world that strikes and holds young men like plain instruction by a healthy Christian physician who has the heaven-born gift of beginning with the flesh and mounting the Platonic ladder of eroticism, till the greatest passion in the human soul is fixed upon its loftiest object. God's covenant with Abraham, which is the fount and source of both the Jewish and Christian dispensation, was that his seed should be like the stars of heaven in number if he was true to Jehovah and his own nature, and neither love nor religion are themselves complete or completely taught without the other. Sex is one of the most illuminating of all revelations, a centre of apperception for moral and religious truth, and beside the ravages of real evils and the often still greater and more tragic ones arising from the baseless fears to which it still more often gives rise, cigarettes, swear words, petty crimes, and most other adolescent sins, sink into insignificance. Every Young Men's Christian Association in the land should have some carefully chosen man to talk wisely and well in public meetings, and who should be accessible for personal conferences to save youth from the vile quacks that flaunt their seductive and alarming advertisements and fatten on the life blood of hundreds of thousands of our young men; for errors either real

or fancied here are the chief obstacles in the soul to a true religion which is so essentially a part of the very nature of youth that he who grows up through the teens and twenties without it in his heart is either abnormal or a victim of our well meant, but imperfect, methods. Is there any institution which should feel this obligation so near and imperative as yours, and should you not hasten to lead the world to new and better ways in meeting this evil?

III. There is one class of young men, mostly though not all college and university students, which your methods do not reach at all, but repel, but whose allegiance is left cold and ineffective. My inquiries among college faculties and students suggest that your association, while doing immense good, has tended to segregate religion within the walls of its own buildings or rooms. I am told that both class and college prayer meetings have declined; that college sentiment regards religious and sometimes moral work as rather your specialty; that your own members are less disposed to talk, pray and work themselves, but rely more upon clergymen, professionals or agents to conduct meetings and to do this work; that, following the law of everything else, religious work is becoming a specialty.

From the university, the reports show that graduate students who are church members are prone to ignore the association and allow its distinctive work to languish. A few of the franker ones confess that the old, old story palls a little. Social work may flourish and each new preacher on the annual list attracts, but prayer meetings, personal work and Bible classes are neglected, and the chief interest is intellectual and found in the discussions of the classroom on ethics, philosophy, ultimate problems of evolution, the constitution of matter, sanctions the virtue, freedom, reality, purpose, etc. In one graduate school where three-fifths were church members, three attempts were made to start a university association and each failed. The feeling was expressed that the pulpit is conditioned by the theological school, and that that is behind the times. One bright doctor of philosophy says that while physicians eagerly watch the latest discoveries in medicine, take journals, have city libraries, and vie with each other in applying the results of the newest investigations, it is not so with religious teachers. They have no professional libraries even in large cities, and the journals they read report little of new researches on the frontier of knowledge and are not in touch with advanced scholarship, because neither churches nor individual competition demands it. One was deeply moved by Harnack and asked the college association agent what he thought of it, but he had never read it. A philosophical student said in an association prayer meet-

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ing that he had found much help in Starbuck, Coe, James, and Leuba but the leader feared that these fostered pride of intellect, and insisted that religion was a matter of the heart. Another requested the purchase of Sabatier for the association reading room but duplicates of certain authorized books of the asssociation, — Sharman, Bosworth and Salmon — were bought instead. The students of Berlin are not called religious, but for years they have thronged no course as they did that of Harnack, since reprinted in his "Essence of Christianity." Cornill's Frankfort lectures on the prophets of Israel, outlining the revolutionary results of Old Testament studies that began in Wellhausen's "History of Israel" in 1878, and describing the work of Kuenen, Duhm, Stade, Smend and others, were crowded by students and educated laymen. When Haupt spoke in Baltimore on Ecclesiastes and Job and told of his work on the polychrome Bible, he attracted about the best audience the University and the city could afford. I am told that Harvard never saw a better audience than that which listened to Osler two years ago on immortality. At Dartmouth, a very successful new movement of opening to students the new Bible as re-revealed by the new scholarship is well launched. I have developed in the last few years a brief course on "The Psychology of Jesus," which is extremely imperfect, and, if it has any merit at all, consists solely in epitomizing new studies, which, although it does not count on examinations, despite its incompleteness, has attracted, I think, more interest than any course I ever gave. Our lectures by docents on religious pathology, the psychology of the sects, the great ethnic religions, and another on Confucianism, teach the same lesson.

From these instances, which might be greatly multiplied, the one ineluctable inference is that zest for such subjects in the university is strong and deep and that there is a new wave of interest in this direction, a demand not yet met, indicating a slow, but widespread and general, intellectual awakening of desire to know the latest and the best. Why have we failed to feed it? Is it ignorance, indifference or suspicion of the free and higher neo-Christianity, the dawn of which is already illuminating the heights? There are still too many of your secretaries who are too narrow and too prejudiced against new movements to do all that they could and should do in their position. We must welcome and bring the best home esoterically if need be, or else abandon and be abandoned by the elete young minds, and be content to work on the lower plane of culture. You have special missions for railroad men, travelling salesmen, clerks, etc. Why not add one for this class? You have helped to make religion a specialty in the college. Should you ot now help to make it a more respected and attractive spe-

cialty? Careful censuses in this country and Europe show that many of our most thoughtful and educated young men with strong religious instincts doubt, for a time and perhaps permanently, the fact of the resurrection miracles and even immortality, as witness the reports of Leuba and Schiller. Why ignore these facts? These are the men among whom teachers in my department spend their lives. Do you help them, and do you help us by your sympathy to help them?

One prime condition of doing so is to develop a perspective that does not see everything in the Bible and church in one plane or level. The slogan, "all or nothing," has in the past led many a youth to renounce all religion. Once it took the form, "If I were convinced that the whale did not swallow Jonah, or that Joshua did not stop the sun, I would abandon all." We have already passed beyond that. We admit that there are shallows as well as depths in scripture. We edit it in selections, and few claim the old absolute inerrancy and uniform inspiration for every part. Now, however, it takes a different form. If a young man cannot accept the reanimation of Lazarus, or the divinity, physical resurrection and ascension of Jesus, or a conscious personal immortality, or the personality of God, which so many an ingenuous youth stumbles at, he too often feels and is felt by others to be an alien, if not an enemy. Here is where we need a new perspective. Is the heart and soul of Christianity lost if all these are gone, or may there yet be left after these negations something quite as vital or more so? This is no question for the dogmatic theologian, but for the psychologist and the religious pedagogue. I believe these great affirmations with all my heart, but in my own way which is far from that of the creed-makers I insist that without any of them there may be yet enough that is precious left to be the basis of a piety that is vital, saving and Christian. Profound as these truths are, there are yet more abysmal depths in the soul of man and in religion.

The ultimate quintessence of Christianity is supreme love of God, however defined, whether as a person or as pantheistic, or a power that makes for righteousness, and love to man as man, however conditioned. Jesus stands for the generized type of man, the ideal of our race, the biological *genus homo*, as God or nature intended him. His transcendent genius enabled him to reduce life to its simplest and most essential terms. He inwardized all rites and beliefs, reduced them to subjective forms, translated Hebrew history, law and ceremonial into psychic principles. His cry was that there is no past or future or remote in space, but everything is here and now. All prophecy is fulfilled in his generic soul. He looked the universe in the face with a normal, and therefore filial, feeling which evolution

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only re-enforces. No soul was ever so sane. His consciousness and life is what man's will some day become if the race advances to the true goal of human evolution. Thus he is the super-man and beckons us to the goal, points out our vocation as human beings. Full knowledge of his mind would be the only complete normal psychology. His pedagogy is normative. His personality was so healthful, majestic and impressive that it brought courage and infected the sick with health and wholeness and the faint-hearted with resolution. Were it now suddenly provable that he had never lived at all but was the slow and consummate evolution of a folk soul, its greatest projection and work of unconscious art, his very ideal would stand for the highest worths and values, of which, since Ritschl, we hear so much, organized and made effective for virtue. Perhaps it is a new argument for Christianity that these rising floods of doubt cannot kill it in the soul. Scripture is the world's great text-book in psychlogy and the new and higher dispensation of Christian truth now dawning and laying the foundations of a new orthodoxy of its own, as much beyond the higher criticism and the philosophies of religion from Spinoza to Pfleiderer and Höffding, as these are beyond the crass and the literal dogmatism of the Puritan faith. The ideals of young men are proverbially the best material for prophecy, and should you not lead the church and the divinity school and not fall behind them in the attempt to minister to just this one class and age, to help which is the noblest of all forms of human service and is your own special work. Let the accredited and conservative guardians of Zion revise and approve all your other work, but if you help this class of men you will have to do it esoterically and independently. This is quite distinct from taking your spirit and meetings to shops and stores and from the lectures in your own rooms, for it is qualitative rather than quantitative, and for a special class, small but very important. Sometimes gains in quality are even more precious than those in numbers, though to some this is a hard lesson.

Again, if you would judge the level of a profession, examine its training schools, for fountains rise no higher than their source. You have great reason to be proud of yours at Springfield and Chicago. I could speak at length of their merits and achievements, but they lack two things:—first, endowment to place their work on a secure basis and to widen its scope, and secondly, academic association. The Springfield school should be moved to some strong university,—not to a theological school, and the Chicago one closely affiliated. Some of you know of the federation movement in higher education. Very valuable professional and denominational schools have sold their property, moved and rebuilt near universities so as to

concentrate all their teaching upon the professional part of their course, and to give the students access to all the general academic courses, and to enable them to breathe a freer, ampler air of culture. The time has come for you to profit by these examples. Some of your secretaries do not know just how to establish the right *modus vivendi* with the university men in their community. They are a little fearful of their criticism or a trifle suspicious of their safeness. Many of them prefer the aid of the more sensational to that of the more solid and cultivated clergymen in town. Their success outside the membership of the churches and their community is often limited by the fact that their own associations have been so limited by the ecclesiastical boundaries. At some of your largest meetings a standing test shows that less than one-tenth present had not already settled church associations.

Again, I wonder what would be the effect of inviting here and there a broad-minded Catholic priest and Jewish rabbi or ethical-culturist in your communities to conduct services of their own, to which their own following should be invited in your rooms, stipulating only that criticism of others' views should be avoided. Would it not be a step of wisdom as well as of tolerance? Colleges invite these men to their pulpits with good results. Catholics and Jews are found in the faculties and largely represented among our college students. All Catholics are fellow Christians; all Jews believe in morality and in the Old Testament, which they usually know better than we. Why not extend your interdenominational character one step further? Here and there, too, if there were a demand for it, and if just the right man offered, I would invite a Buddhist, a Brahman, a Confucian, and if there were a call, as would very rarely be the case, I would open a school and conduct a class in comparative religions. We must overcome all narrowness, limitations, prejudice, and realize that the largest question in the world to-day arrays all religions together against the crass materialism of an industrial and money-hunting age. Better a good Buddhist, or pagan of any kind, than a bad Christian.

Finally, do not both your hymns and your music need attention by a committee who know the resources of hymnology and sacred music? Andrew D. White, who was an evangelical Christian, says in his recent Autobiography that your sentiment is "gushy;" that whereas you used to sing of God's majesty and of standing firm in faith as on a rock, now you prefer to whine

> "Oft it causes anxious thought,
> Do I love the Lord or no?
> Am I his or am I not?"

as if it were a matter of daily weather lore. Should there not

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be more music and song, better in quality, and in which all can take part? One of the great evangelizing powers in Christian history has been the magic charm of cadence and rhythm which, where the head is weak or intelligence reluctant, wins by a flank movement that seizes the heart. My informers say that you sing less, know less good music and hymns, and have less opportunity to enjoy singing what is known than formerly. You know better than I whether this is true. There are a few men in the country now who know the history of hymnology and sacred music, and can, not only lecture, but illustrate. Should you not keep these men very busy?

Your general growth has been remarkable. Within the last few months I have, unknown, visited many associations and made many personal inquiries. Your secretaries and assistants are gentlemen and men of the world in the best sense, have shown me about and answered my questions often with the greatest patience and intelligence. No one has suddenly turned upon me with the question which should be always pertinent, but which has often been so tactlessly introduced, to ask me if I loved Jesus or was a saved man. You have billiards and pool, games, gymnastic dancing, soft drinks, swimming pools, reading rooms, current topics, debates, exhibits, excursions; you hold meetings in shops, are doing noble work in the army and navy and among street railway men, have classes, lectures, contests galore; your athletic work has of late grown faster than that of the colleges and high schools; you have splendid buildings; your year book shows bewildering activities; but are you not doing too many things? Other organizations have multiplied very rapidly. Do you always respect their fields? You do not proselyte. Do you help other agencies to do their work? Are the criticisms that the church often makes that you interfere with their work ever justified? You know the fate of the secretary who cannot show increase each year by merely numerical standards. What of other qualitative and more immeasurable tests? Machinery, over-organization, too much control and authority, specialization that relieves the individual of his own responsibility, are dangers peculiar to all organizations, especially in this country where some things are organized to death. Utilize all the talent in the community, but tsick to young men. Let the many other agencies now found in every community look chiefly after boys. Have you not too many old men past the dead line in places of authority? I would not, like my former colleague, Osler, chloroform men of sixty, but should you not consider an age limit? Most of the world's work is done by men under forty, or at least under fifty, and very many in religion are old, stagnant and sterile in soul even younger. We all revere old age and its wisdom,

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but there surely is some danger in some fields from dead men who are not yet buried. It is one of the ruling passions till death in us oldsters to give advice and also to control. Indulge us in the former occasionally but you have attained your majority and should indulge your own instinct which is one of the most cherished prerogatives and strongest passions in the young to resist our authority, to stand erect on your own feet; to free yourselves from the conservatism of men of the past; to look about you to the horizon on all sides and light your own way in the world; to learn to profit even by your errors, for thus the best things in that best of all schools of experience are learned. You are not true and complete adolescents unless and until you defy and refute by practical demonstration all the timid apprehensions of graybeards and push on into the infinite future where all the best things yet lie, for they have not happened yet and are therefore not found in history. Thus only by adhering to your own peculiar task will you be able to realize to the full the brilliant promise of your development thus far; you cannot go wrong and great new things are before you if you are faithful to your watchword, which should be, "Jesus for young men and young men for Jesus."

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THE EDUCATION OF MINISTERS, AND SUNDAY SCHOOL WORK AMONG THE UNITARIANS.[1]

By G. Stanley Hall.

The one thousand million people alive on the earth to-day are but a small handful compared with those who have died, and we must believe that they are a yet smaller handful compared with those yet to be born. We present tenants of the globe are but one link in the endless chain of generations, a tiny point of contact between two great clouds of witnesses, the one in the past, the other in the future. China turns backward and worships ancestors, realizing that what is good in and about us of to-day is due to their health, virtue and self-sacrifice. But the new genetic ethics and psychology, if it be not better called the new religion, not yet represented in any academic chair or organized church, but just in the morning twilight of which it is our thrice-blessed privilege to live, turns to future generations and finds in them the object of supreme regard, service, and reverence. It would live and die subordinating all that we are and can do in mind, body or estate to the betterment of the great majority yet to arrive. Thus we are of real account in the world only so far as we help posterity to an higher vantage ground. The ultimate criterion by which to judge every individual and institution is what it does to favor the bringing forth of the most and best citizens of the new kingdom or republic of man that is to be, and, second only to that, what it does to bring each member of the next generation, when born, to the fullest and most all-sided maturity of which he is capable. Everything is bad and wrong that tends to multiply, mature or give power to the worst stirps and specimens of the race. Thus to all our present-day problems of politics, finance, trade, colonization, criticism, municipal administration, charity, sects,—to every question in short, we find the right solution to be that which is in the interests of the multitudes to whom we transmit the sacred torch of life. How to do this most effectively and also how to supplement nature by nurture, is thus the supreme problem to which all these and all others are ancillary, and which invests them all with new and higher interest.

This simplifies both creed and life. As a creed it gives a

[1]Address delivered in September, 1905, before the Unitarian Conference at Atlantic City.

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sane and poised intellectual unity and a belief by which we can abide, a major premise from which we can with least effort think our way out in all directions. Recognizing that the most precious of all wealths and worths is heredity, it sees also that the highest test of every human institution is its race educational value. It postulates harmony between the logos of science and philosophy and the biologos or spirit of life that is ever weaving new and more subtle textures on the loom of time. This, too, is the basis on which the Platonic philosophy tried to reconstruct society, but it was Jehovah, the personified genius of the Jewish stirp, who laid the corner-stone of our faith in the covenant with Abraham that just in proportion as he lived true to God and nature would his seed come to rival the stars of heaven in multitude, and the transcendent work of Jesus was in regenerating love, the greatest thing in the world and the fount of life. Heredity is a fixed quantum and the goal of study and research, the sum of duties and the chief end of man is to make the most and best of it, to economize and minimize wastage and prevent decadence. He is the sagest who judges even minor problems in its light and he is personally most virtuous whose life most conforms to its interests and he the greatest servant of mankind who makes the world materially, intellectually and morally fitter for those who shall crowd and over-crowd the earth when we have joined the other great majority of the past.

What then is the chief danger of *our* race and age? It is over-individuation to a point at which it interferes with genesis. It is so easy to rob posterity by consuming in personal development, enjoyment and effort the life energy meant for future generations, to over-cultivate and refine ourselves to be magnificent men and women at the cost of parenthood. This taking out of life more than it can bear is the quintessence of selfishness, which is sin. Up to a certain point we do most for our children in doing most for ourselves, but the subtle line where this ratio becomes inverse and we over-work and over-develop self at the expense of offspring is always present somewhere, although it is drawn very differently for different individuals and races; but to find this line and live exactly on it means racial and family advance, and to deviate from it either way brings the subtle stigmata of degeneration and ultimate extinction. We are not the last or the best on earth and it is cosmic provincialism to train only for service to and in the world as it now is, as if each generation were a fac-simile of that which preceded. The élite few pioneers and prophets of this neo-Christianity already proclaim a service that is a fiery passion that would consume self as fuel—yes, would be dung to fertilize the new life, just as the soma is subordinated to the immortal germ plasm. Now that we see that Darwin was only the John the Baptist of the higher

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evolution that shows the soul no less than the body to be a product of development, can we regard spending and being spent, living for the children as the only objects worthy of love, self-sacrifice and devotion, in its true perspective.

Is there any better standard by which to judge religious bodies than efficiency for the future, the power of which has inspired every great new religious movement? It was a splendid galaxy of men that created Unitarianism as a new and higher story of Protestantism, a movement which in itself, and perhaps yet more in what it stimulated, is the greatest religious achievement of this country. Channing, Emerson, Parker and the rest built a new altar to the Holy Ghost, higher above the fogs of superstition than any other, and multitudes who never read their pages are larger, more truly pious and virtuous than they could have been without their work. It has lifted the level of all denominations but while we continue to pray in the name of Channing and with our faces steadfastly turned toward the Mecca of Boston and Cambridge, other oracles have spoken, and both scholarship and enlightenment quite as great are found elsewhere. Complacency in past achievement and a just sense of present attainment, wealth, respectability, general culture,—all these may exist without the one thing needful. Judged by the standards of numerical increase of congregations, of the proportion of young people found there, the quality and number of those pressing into the ministry, the relative attendance to, and success in, the Sunday School and in adjusting to the nature and needs of adolescence and of childhood there, do we not show sure signs of indifference, disrespect, and may I even add contempt for the future in our smug complacency with the past and present?

What are, then, the present duties which due regard for the future demands? I shall name but two,—that to the professional and that to the Sunday School. When the scientific method was first applied in the religious field it had a prodigious work of clearing up and cleaning out of the Aberglaube deposited through centuries. Criticism, long continued, favors a kind of diathesis of negation in which the just balance between destructive and constructive work is lost. It should, however, be pushed to the uttermost and will go on. Even Unitarianism is being shown to have paused half way. Perhaps all that is supernatural and personal immortality, in the old sense, may go the way of the infallibility of the Pope, of the letter of the Bible and the Trinitarian divinity of Jesus. But even so, far more that is good remains and far more that is new is brought to light than all that is lost. What is the corner-stone of our faith? The theocracy and the prophet statesman who guided every step of ancient Hebrew history and Jesus as the ideal type man of the race, devoted with utter abandon to the

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love and service of God and man, the one of all who ever lived more protensive toward the future, using the past only as a key to it, who, if his interpretation and temporal perspective of the coming kingdom were not inerrant, conceived its outlines truly and showed the true moral attitude to it, Jesus the truest member of the *genus homo*, the superman;—this conception above criticism and in some respects above historicity itself, abides. The psychology of Jesus and the Christian life, as now beginning to be set forth by Flournoy, Baldensperger, Harnack, Runce, and I may add, by Leuba, Starbuck, James, Coe and many others, make his life glow with a new light and heat, like gold purged of dross, till all sense of loss vanishes when compared with the gains. This psychological movement, which ought to have been Unitarian, and is, in my humble judgment, sure of a career in the next generation, will enlist no less an era of scholarship and be more fruitful than the critical era has been because more positive. But it was reserved for President Harper, of Chicago, to be the first to see and to say how central this must be in the future training of clergymen. It has been said that all who become truly liberal pass through a Unitarian stage, even if they do not know it. But why should they ever emerge at another certain stage? The day of the crude rationalist, who tastelessly and borously demonstrates that the whale did not swallow Jonah or that even Lazarus and Jesus did not literally and somatically arise from death, has passed. His denials have no weight because we realize that true religion is not involved in such questions. But it must be a duty especially laid upon us to see that negations do not cause religious indifference but are swallowed up in essential and glorious affirmations, for the measure of man's power in the world is his capacity for belief and not that for doubt. Instead of the meagre endowment of our seminaries, the achievements of whose professors are a marvel, even without considering their environmental limitations, the wealth and learning of this denomination ought to make religious scholarship its specialty and cause it to feel that all the best constructive learning of the land and in its field should be in these institutions. How some of these most promising professors in seminaries of other denominations would flourish if transplanted to our freer air! To endow academic chairs or even universities is the best of all the long-ranged, statesmanly ways of preforming the future. In an address at the Musée Guimet, the greatest school of comparative religions in the world, it was lately proposed to prepare native Buddhists, Confucians, and Mohammedans to preach and revive their own religion in their own lands, on the assumption that a good representative of these cults was better than a poor, pinchbeck Christian. And why could not Jews, Catholics, Baptists, Methodists and the rest teach all that is

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distinctive for their own faith and practice in a central seminary? But the afflatus of the muse of the future must not make me a dreamer or a visionary. You have the prestige and the means. Why not utilize them more in this field? Do you not need one of the chairs of religious education based on the new knowledge of childhood and youth, such as is now being founded elsewhere, one solely devoted to charities, one each of the few leading ethnic faiths of the world that shall be sympathetically and constructively presented now that the earth is brought to our doors by the new cosmic consciousness, and one of missions now that the old methods of propaganda are breaking down and we see the new sympathetic way? Is this not a day of opportunity unprecedented in the city of Mansoul? Religion is being re-revealed to the future of the race and never have our ideas of the future undergone such rapid expansion as within the last few years. Instead of present apathy I believe that, from the new outlook towers, a new dawn is breaking in this materialistic money-mad age, and that another generation will see religion resume its rightful place as the crowning faculty of man, as the chief instrument of progess, the spring and motive power of interest in science, and that, radical as may be the reconstructions it yet needs, Christianity can never be superseded because it is based on love which is the supreme power in the world and the promise and potency of all future generations.

And for the Sunday School, childhood must have myth and miracle because they are the *lingua franca* of the heart and of the imagination. The reason and even the intellect are largely individual products, but the feelings and imaginations are racial, purely human and make us citizens of all times and spectators of all events. If human evolution were finished and its nisus spent, it might be otherwise, but their very existence and strength is the best proof that man is yet in the gristle, if not in the tadpole stage, and that the best history cannot yet be written because it has not happened yet. Therefore feed the fancy and the sentiments, and instead of the subtle senescent insinuations of a sense of superior insight if the supernatural is detected and challenged, make childhood as unconscious of miracle in scripture as in Homer, so that all the idealizing powers be fully developed in their nascent plastic stage. Cultivate sympathy before criticism for some of the best and most marvellous lives of the saints, for interferences of the order of nature by deity. Delay rather than precociously hasten the dawn of skepticism. Develop agencies to equip teachers with a wide and, above all, well-chosen repertory of stories, and train them in the master art of telling them, as ancient bards and minstrels transmitted all that was known before print kept alive much fit only to perish and before books multiplied and

the printed page thrust itself between nature and the open soul. Plant deep by folk-lore methods the love of sky, stars, sun, moon, sea, forest, trees, flowers, birds, animals, as they were loved and known before they were labelled with Greek and Latin nomenclature, and before laboratory and technical methods made hard the way of the soul to its proper pabulum.

For adolescence, restore a carefully revised conversion cult, for this is universal among every savage tribe and every race and sect on earth save our own. It comes at the age when every normal youth and maiden, having been fed, clothed and educated (all the currents going to the individual), begins to feel in the springtime of maturity that the currents must be reversed and self subordinated to the higher life of service. One of the chief touchstones of a cult is how it achieves this great natural revolution from egoism to altruism, which change comes either suddenly or gradually to every soul that attains full maturity. Teach briefly but very clearly something that every youth at a certain age most of all wants to know of the new power of transmitting life, and make young men feel that to his honor, which is one of the strongest and highest but most easily perverted sentiments, is committed the interests of future generations, for between sex and religion God and nature have wrought such a bond that each is exalted or degraded with the other. Magnify religion by restoring its old function in this field. Do something, at least, to save youth from the new dangers that now threaten them, especially in urban life. Teach a little of the ethics that begins not in the abstract problems of the sanctions of morality, but with personal regimen and the higher hygiene. And, lastly, impart in brief epitome, orally without much book work, but frankly and without reservation, your own best and highest thoughts and feelings concerning all the great problems of the world, that your own interests may be infectious. Disguise nothing of your own ignorance or doubts, recognizing the passion of the young people in the teens for complete adult companionship on their level. You know nothing and can feel but little which cannot be communicated to the bright boy or girl of this age which has, for a brief period, almost a genius for imbibing knowledge by first intention. For art, history, literature and all the cultural remainder, your Sunday School Manuals show that you have already made better provision than any other denomination.

I have spoken more from the heart than from the head. Our history seems to me the proudest of that of any religious body. Our possibilities have inspired the greatest hopes, although both seem now a little on the wane. If I have been too frank I can only pray you to pardon my temerity; if mistaken, to forgive my ignorance.

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HOW CHILDREN LEARN TO READ: AN EXPERIMENTAL STUDY.

By Dr. Lucinda Pearl Boggs, Urbana, Illinois.

The experiments recorded in this article were undertaken because the writer believes that reading is one of the most difficult and most important tasks of the child's first year at school. The purpose of teaching children to read seems such a simple one, namely: to be able to associate ideas with printed forms, that it seems there should be one natural psychological method. That there is such a method, most educators agree, as President Hall says, but it has not yet been worked out and perfected so that it meets with general approval, and much remains to be done before it can be shown to be a satisfactory, universally applicable method. It is hoped that the results of the experimental tests made will contribute toward elaborating and establishing such a method.

A true method must recognize that the content of the printed forms should seem to the child *worth* reading, be interesting. Thought content is the important element, and its association with correct printed forms, the chief process. This is a very old principle. In a first reading book published in 1833, used by my father, the "Advertisement" closes with the remark, "No other regard to classification, or arrangement of the different lessons which compose this work, has been observed, than to make them as interesting as possible." The compiler tells the young beginners that "To read without understanding, is like eating nuts uncracked, the words are the shell, the meaning is the *meat*."

Any method which violates this principle of going from content to form cannot hope for the best ultimate results. The old alphabetic method and some of the later phonetic systems are decidedly guilty of this violation besides other pedagogical sins. The confusion which existed in the minds of people regarding spelling, pronunciation, and reading proper, is partially to blame for these formal methods which lead the child all around by Robin Hood's barn causing him to learn a tiresome amount of preparatory stuff which does not prepare him for reading in the best way. Nearly every method now employs words and sentences in the first lessons, but they are too often words and sentences chosen for their form value instead of their thought value, *e. g.*, "The bat hit the cat on the mat."

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A great deal has been done the last two decades by experimental psychology in investigating the reading processes, and the results of many of the experiments help to discover the defects in the old methods of learning to read and give valuable aid toward establishing a better one.

For example, the idea that words are recognized by noting the letters or parts of which it has been composed, has been contradicted by Becher,[1] who finds that the gross word form is the important factor in bringing about recognition. Messmer[2] says that long words are recognized in the tachistoscopic reading after a number of exposures in which the attention is fixed successively on small groups of letters dependent on optical distinctness of the different groups. According to Cattell,[3] Sanford,[4] and others, the relative ease with which certain letters are recognized in comparison with others is considerable. Sanford's grouping for ordinary small type is as follows: m w f p q r j v k b y h d g x a i l u s t n e c o l. This would indicate that when the words were resolved into their parts, the vowels would be the last rather than the first upon which to lay emphasis. A very good primary teacher declared that her pupils paid little attention to vowels in reading, but recognized the words mostly from consonants. Another reason than their indistinctness of form, that vowels are naturally ignored, is the variety and confusion of their sounds. If vowels are the letters to be taught first, there must be greater distinctness in their printed form and less confusion in the sounds attached to each.

Cattell[5] also finds that when two or more letters up to five are exposed at the same time, the total time needed for recognizing them may be shorter than when each letter is exposed separately. Short words are recognized and spoken a little more quickly than letters, which goes to show that there is no physiological or psychological reason why a number of letters cannot be grasped as a whole. He finds that words not forming sentences and letters not forming words take almost twice as long for recognition as when they are in familiar construction, and that three times as many letters can be recognized in words as

[1] Becher: Experimentelle und Kritische Beiträge zur Psychologie des Lesens bei kurzer Expositionzeit. Zeits. f. Pschol. u. Physiol. d. Sinnesorg., XXXVI, 1904, pp. 19-73.

[2] Messmer: Zur Psychol. d. Lesens bei Kindern u. Erwachsenen. Archiv. f. d. Gesammte Psychol., Bd. II, 1903, pp. 190-298.

[3] Cattell: Uber d. Trägheit d. Netzhaut u. d. Sehcentrums. Phil. St. III, p. 94 ff.

[4] Sanford: The Relative Legibility of Small Letters. *Am. Jour. of Psychol.*, Vol. I, p. 402 ff.

[5] Cattell: Uber d. Zeit d. Erkennung u. Bennenung v. Schriftzeichen, Bildern u. Farben. Phil. St., II, pp. 635-651.

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when isolated. He states that the maximum of rapidity with which one can read letters which form words and words which form sentences changes with the knowledge of the language and of the selection. If content is of value in an adult's reading it would seem to indicate that it would be of value in a child's learning to read. He also finds that sentences were taken in as a whole in his experiments and we know that many people who read rapidly read by sentences instead of by words. Nevertheless he finds that if one has grasped the meaning of the sentence he has a clear vision of each word. Thus there seems to be no physiological reason or psychological reasons why sentences should not constitute a unity in reading and in learning to read.

Messmer[1] finds that children from seven to twelve years of age read nonsense text almost as rapidly as significant texts while adults take almost twice as long for the former. It would be interesting to know whether these children learned to read by some method which placed little stress on the thought side of the reading. He also says that children pay little heed to orthographic or grammatical rules in reading by the tachistoscopic method, showing that they grasp the whole rather than analyze. On this very point President Hall[2] says on reading methods: "Children love wholes and their mental acts are large, generic, and often complex. They abhor elements, details, abstractions. They find, at least in the vernacular, sentences easier than words."

Impressed with the roundaboutness of the different methods of reading, with their mechanical, uninteresting detail, and having experienced as primary training teacher the actual difficulties of teaching the child to read, I was driven to consider the process closely. Two things in particular I noted in my observations. Children were interested in the reading so long as the content was interesting. They became restless and inattentive when mechanical drill on sounds and forms began, if the drill was not very rapid and "snappy." But rapid mental work soon produces fatigue, and Messmer[3] has pointed this out in saying that the effects of fatigue are found to be greatest in the most rapid reading, and that results of fatigue are more marked in children than in older persons. Short, rapid drills of two or three minutes can be interspersed in a long, slow reading lesson where the children are busy with an interesting story, if it does not break the continuity of thought and destroy their interest; otherwise, it is better at the begin-

[1] Messmer: *op. cit.*
[2] Hall: Monograph, How to Teach Reading, p. 14, Heath & Co., Boston.
[3] Messmer: *op. cit.*

ning and end of a lesson. A lesson which leaves a child fatigued has taught him false ways of working and tends to disgust him with working at all.

Aware of the value of an interesting content and of the pernicious effects of too rapid mental effort, the experiments reported here were different in method as indeed they were in purpose from any hitherto made in reading. No effort was made to determine the exact time of exposure of each printed form, though it was approximately the same, but the number of times any one printed form or unit must be shown the child before he could recognize and name it himself. The printed forms, or printed units, as I prefer to call them, were a letter, a syllable, or compound phonogram, a word, and a sentence, and were selected with a view to testing the different methods of reading, as the alphabetic, phonetic, word, and sentence methods. My observers or subjects were four little boys under school age who could not read, and the method was very simple and natural, as it must of necessity be with such young children.

On a stiff white card was written a letter of the Greek alphabet. The Greek letters were chosen because many children learn the letters at an early age from blocks, etc., and because I did not wish the letter to recur in any of the other units. Below the letter was pasted a meaningless syllable, selected from the phonograms of the *Rational Method*, such as *ness*, *ing*, printed in a heavy, but simple, odd type. Underneath this was pasted a word which had a definite content for the child such as mamma, dog, etc., in ordinary clear print. Lastly, at the bottom of the card, was written in large vertical script a sentence from the story of The Wolf and the Little Pigs, which I had been teaching the children and in which they seemed very interested. A specimen card would be like this:

Δ
per
hen
Let us go to the Franklin fair.

This card was placed at a convenient distance before the child as he sat by me while a larger piece of cardboard, with an opening sufficiently large to expose one line at a time, was held before the card and each line on being exposed was read by me and repeated by the child. Only a very short time was allowed for each exposure and was approximately the same in all cases excepting for the sentences, but still long enough for the printed form to make a definite impression. When the whole card had been gone through in this manner, the lines were again exposed and the child read those he could remem-

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ber. If he could not recall a form in the usual time, or miscalled it, I read it and had him repeat it as at first, and then after having gone through the whole card we returned to the form which had caused the difficulty. If the child could not this time recall it I read it again, having him repeat it and after a short time returned to it again. Rarely ever were more than three exposures necessary. I employed eight cards altogether, showing the same ones on successive days. The children seemed to be working under natural conditions without any embarrassment, and rather enjoyed it. Although there was greater uniformity in the final results than I had expected, there was considerable difference in the children and in their method of attacking the problem, while their mistakes were also characteristic, so that a word as to the children themselves is needed.

H was a sturdy, healthy boy of five who took great interest in the whole process and believed he was learning to read. He had learned a few words and sentences several months before, but had forgotten them entirely, though I believe it had a slight effect on his reading. He was capable of sustained attention and accomplished almost three times as much in the experiments as *W*, who was employed about an equal length of time. He showed considerable improvement, reading the cards the last time with more correctness.

W was a weakly, reticent child of nearly six who did not speak distinctly. He seemed interested in the story, but put forth little effort in reading the forms and his attention was difficult to keep on the work, though he showed no unwillingness to undertake the task.

J was a delicate, quiet child of five, quite interested in the work and anxious to do his best. Twice he attempted to read sentences before I had read them for him, having from the other side of the room heard *M* reading sentences. He showed considerable improvement the second morning, although his chief fault was that his glance left the card so quickly, which accounts, perhaps, for his miscalling forms as often as he did.

M was a healthy, bright boy not yet five. He was very interested and attended well, although he took the whole thing as play. He misread but two lines and showed considerable improvement at the second trial. The fact that he had learned his letters affected his reading, and on the whole he associated the oral and printed best of all. *J* and *M* were employed at two different times and relatively accomplished as much as *H*.

The table below gives the results of a number of experiments and is to be understood as follows: Under T in each column is given the total number of tests made with that printed unit. Under R is given the total number of times the printed units

were shown before the child could name them correctly. Under W is given the number of times the unit is miscalled, and under Av. we have the average number of times which each printed unit of that class must be shown. T. Av. means the total average for all forms.

	Letters.				Syllables.				Words.				Sentences.				
	T	R	W	Av.	T	R	W	Av.	T	R	W	Av.	T	R	W	Av.	T. Av.
H	32	60	2	1.87	32	72	6	2.25	32	50	4	1.56	32	40	0	1.25	7.2
W	12	36	11	3	12	29	9	2.42	12	20	9	1.66	12	13	4	1.1	8.2
J	10	26	3	2.6	10	22	2	2.2	10	18	3	1.8	10	10	0	1	7.6
M	7	11	0	1.57	10	22	1	2.2	10	16	0	1.6	10	12	1	1.2	6.6

In all cases the sentence is recognized more often the first time than any other unit. The word was recognized more often than the syllable or letter except in the case of *M* who had learned the alphabet some months before, but it is practically the same. For this reason three tests with letters must be thrown out as the the child called the Greek γ, y, and ζ, z. In two observers the syllable must be shown more often than the letter, and in the two others the letter must be shown oftener. In both cases where the syllable must be shown oftener the children had learned some English letters.

It is decidedly worth noticing that there is a greater uniformity of result in the case of any one printed unit for the different individuals than there is for one individual with the various printed units, excepting in the case of letters for which the reason has already been given. For example, under sentences there is a difference of only .25 between the highest and the lowest, and under syllables .2, while in the case of *W*, letters must be seen almost three times as often as sentences. *M* and *H* each must see syllables once oftener than sentences and these two show the greatest uniformity. It is worth while comparing *W* and *M* as having the lowest and highest averages in regard to the matter of miscalling forms. *M*'s only mistakes one form for another twice while *W* miscalls forms thirty-three times, showing that he did not get as distinct and vivid impression of each individual form. He persistently called the second card by the names he had learned for the first card. He only misread one sentence and that came about by his reading the sentence on the second card as the sentence on the first as soon as he saw it, before I could read it to him. Apparently he saw no difference in the sentences but memo-

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rized the words entirely from hearing them. *M*'s mistake in reading the sentence was only certain words misread, and in one case after looking at the sentence for some time he said, "I know it, but I don't know the beginning." On being supplied with the first words, he read the sentence correctly, showing, I believe, a definite association between printed and oral words. *M* and *H* would sometimes say, when not able to recall a form, "I don't know." *W* and *J*, who had next the largest proportion of miscalled words, never seemed to realize that the form had been perfectly forgotten. If they did not miscall it, they sat waiting as if expecting it to come by inspiration. I allowed a uniform length of time before I told them the correct reading. We see that the weakest child did almost as well with the sentences as the others.

An incident which made a profound impression on me, child though I was, occurred while I was attending a country school. It has all the force of a carefully planned psychological experiment and is very apropos. During a short spring term a small boy started to school and the teacher employed the sentence method in teaching him to read. He was a timid, backward child and with the greatest difficulty learned to read a few sentences about the cat, the rat, etc., and to know a few words. He did not attend school again for a year, and the next teacher attempted to teach him the alphabet alone, but in the two or three months he succeeded in learning only a few letters. The child died during the next winter, so that the ultimate result must be unknown, but certainly in this case the sentence method was vastly easier for the child.

Of course no one is going to adopt the alphabetic method, but there is a very decided danger of teachers laying too much stress on forms without meaning, as is done in some of the phonetic methods. This article does not pretend to present any new method, but wishes to emphasize the value of content as opposed to form in teaching children to read. Every wise teacher, if she keeps this rule in mind, will learn when the child must have drill on words, and when he should learn spelling and phonics during his school course, for they are not to be neglected. But learning to read and loving to read are to be placed first, for reading is the "Open Sesame" to a vast treasure house.

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STREET GAMES OF NEW YORK CITY.

By JOHN H. CHASE,
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Children have been asked what games they liked the best, and from these lists the most popular games have been tabulated. Such lists have been made for Brooklyn children, and for Worcester children.

The trouble with this method is that the most recent games played are apt to be recorded by children as the best, gambling games—like craps—are rarely mentioned, and finally children often record games which they enjoy, but rarely play.

Realizing these defects, and desiring to obtain an accurate list of the most popular out-door games of New York City, I followed the plan, for two years, of walking through the crowded tenement house streets and tabulating (1) the different games being played, (2) the number of children playing each, (3) the amount of seeming interest, (4) the date. The same streets were generally covered each day, but this was varied occasionally to see if different regions were doing the same thing. As a rule, with some variations, the great mass of tenement house children played the same games at the same time the city over. And the ten most popular games during the season when I could watch them, were:

I. Playing with fire—bonfires, fires in buckets, etc.

II. Craps—a gambling game with dice.

III. Marbles—always "for keeps," and a simpler game than in the country; several simple varieties.

IV. Potsie—a primitive kind of hop scotch.

V. Leap frog—over milk cans and fire pumps, as well as over boys. Commonest contest to see who can leap the farthest before clearing the obstacle. Many varieties—"head and footer," Spanish fly, etc.

VI. Jumping rope.

VII. Baseball. Probably should be nearer head of the list, but my observations did not include the summer.

VIII. Cat. It is probably also played in the summer. A short stick is pointed at one end and placed on the street. The point is tapped with a longer stick or bat. When the short stick bounds into the air it is hit down the street, and the other boy throws it back as near the starting point as possible.

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There are three ways of scoring, according to which variety of game is being played.

IX. Buttons. Boys throw, or slide, buttons in turn, from street curb toward a wall. The boy coming the nearest throws all the buttons up into the air. They fall in a shower and the ones which land "heads up" are his. Then the boy who came second closest throws the rest up, and keeps those that land "heads up," etc. The same game is played for other things. Cigarette pictures are played for in this way during January; pennies and almost anything flat at different seasons.

X. Tops. They are generally put in a ring, and the game is to split your opponent's top. You may have a poor top for splitting purposes and a good one for spinning.

The dates for different games are as follows:

	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.
(1)	Leap frog.	Leap frog.	Potsie.	Potsie.	Snow balling.	Cat.	Base ball.	Base ball.
(2)	Craps.	Craps.	Craps.	Craps.		Tops.		
(3)	Buttons.	Buttons.		Cig. Pic.				Cat.
(4)	Fire.	Fire.	Fire.	Fire.	Tops.	Marbles.	Marbles.	Marbles.

Conclusion.

1. These ten games are unlike any lists made from the answers of children.
2. The table shows the fire instinct to be very strong.
3. The gambling instinct is very strong.
4. Three popular games are generally going on at the same time.
5. The running games such as tag, prisoner's base, etc., are replaced by cramped games such as leap frog, hop scotch, etc.

NOTES ON THE PSYCHICAL CAUSES OF SWEATING.

By G. E. Partridge.

These notes were written in 1898. It seems that they contain a few points that are still worth recording. The data consist of some replies, 130 in all, to sections II and III of the questionnaire on automatisms and nerve signs, sent out by President G. Stanley Hall in 1894. The questions in the sections referred to called for remarks on the causes of sweating, its point of beginning, of greatest abundance and of least abundance. All of the replies are from Normal School girls, in age from seventeen to twenty-two years.

Summaries of the data follow:

First appearance—forehead, 37; upper lip, 34; back, 17; under arms, 13; neck, 13; palms, 13; nose, 11; lower lip, 6; temples, 4; back of neck, 4; chin, 3; face, 3; breast, 3; chin, 2; bend of elbow, 1; back of arm, 1; under eyes, 1; feet, 1.

Most abundant—Under arms, 14; hands, 14; forehead, 13; face, 11; between shoulders, 11; neck, 10; cheeks, 6; upper lip, 5; waist, 3; chest, 3; temples, 3; knees, 3; back of neck, 2; legs, 2; feet, 2; nose, 1; lower lip, 1; chin, 1; between fingers, 1; end of fingers, 1; body, 1; under chin, 1; arms, 1.

Least abundant—Hands, 25; cheeks, 14; face, 12; legs, 8; arms, 6; forehead, 5; feet, 3; knees, 3; back, 2; upper lip, 2; neck, 2; forearm, 2; back of neck, 2; chin, 1; head, 1; thighs, 1; palms, 1; ends of fingers, 1.

Causes—Fear, 31; excitement, 22; nervousness, 14; anxiety, 13; mental exertion, 11; spontaneous, 11; anger, 8; grief, 6; pain, 5; embarrassment, 5; surprise, 4; happiness, 3; illness, 2; after blush, 1; dread, 1.

Perhaps it would not be well to put much confidence in the replies to questions about local differences in sweating; these are not easy observations to make, and there are many conditions that would prevent ordinary reports from being at all accurate. Evidently, however, there is a problem here, and need of careful observations under favorable conditions. The data indicate that there is some order in the appearance of perspiration, and some tendency to greater abundance in some parts than others, aside from the more obvious mechanical causes and natural conditions.

The psychic causes that are assigned are interesting. If we put excitement among the abnormal or unpleasant emotions, as it may well be in these instances, all but three of the cases are to be classed as caused by unpleasant feelings. It is not very clear why sweating should be caused more frequently or more abundantly by unpleasant feelings than by pleasant feelings. There might arise in the mind two sets of explanations: either unpleasant emotions are *per se* more intense than pleasant emotions; or there is some reason, biological, chemical, or mechanical, why unpleasant emotions are accompanied by sweating, either as a direct expression or part of the emotional disturbance, or as the indirect result of inhibitions, excitations or spreading of stimulus that are set up by the emotion. Whatever of truth may be contained in the replies to our questions, they serve to raise a

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problem in the expression of the emotions. The problem may be stated in two points. Why, and how, is sweating an emotional expression at all? How can tendencies to particular order of appearance of the phenomenon, or local differences, be accounted for?

One would naturally turn first to the physiological facts. Sweating is under the control of the nervous system. The chief centre is in the medulla and there are subordinate centres in the cord. The two phenomena of sweating and circulation of the blood in the periphery are independent of each other, for there can be sweating when the skin is anæmic, and on the other hand the skin can be congested with blood without sweating. There are several means of stimulating the sweat centres: (1) directly by the action of blood on the centres in the medulla, evidently the temperature of the blood being the exciting condition; (2) reflexly, by heat applied to the surface of the body; (3) by increased cardiac and vascular activity; (4) by action of drugs; (5) by a watery condition of the blood; (6) by emotional disturbances. The quality of the secretion undergoes modifications in several ways. There are pathological conditions in which it is much modified; and some mental states are said to cause pronounced changes, perhaps chemical, in the perspiration.

The primary purpose of sweating is clearly to regulate the temperature of the body. It stands also in sympathetic relation to the kidneys and the lungs, and each of these functions supplements the other. Poisons of the body are eliminated in perspiration, and as we go lower in the animal scale, the respiratory functions of the skin appear to increase. It is said that in the frog for example, respiration can be maintained by the skin, if the lungs are removed. Skin respiration was the first form of breathing, and that it is still an important means of elimination of excretory products is shown by the fact that death can result from varnishing the body, or otherwise preventing the normal excretion.

Considering the physiological data, two explanations are suggested as possible to account for the fact that emotions stimulate sweating mechanisms. (1) There is, connected somehow with emotional disturbances, either an increase in the temperature of the blood, or rapid production of toxic products which stimulate directly the sweat centres. Unpleasant emotions, as has been suggested above, may be more intense, or they may be connected with qualitatively different changes, say chemical, as compared with other emotions. (2) The stimulation of the sweat centres may be produced through the stimulation of vascular or other motor mechanisms, or by direct spreading of excitation. These together constitute a physiological explanation of the connection between sweating and the mental state.

But the question that is always arising in the mind of the psychologist in regard to emotional expression, suggests another line of explanation. It is possible that the expression of emotion in sweating has other significance than a merely mechanical or physiological one. In the particular matter of sweating, the question is whether there is any direct connection between the mental state, and the physiological effect, by nervous action of an "instinctive" nature; or, again, whether the peculiar localization of sweating has any biological significance, whether it has come about by adaptation to any conditions, that are not fully represented, in the physiological explanation. It is not to be expected that the physiologist shall take into account these nervous connections; the anatomical relationships would be too special for his observation in any case.

In the matter of localization of sweating, the physiological explanation that there are more sweat glands in one part than in another

does not go far enough; one may ask why there are more glands in one part than in another. Of course the tendency of the skin to heat by friction explains a part, but not all. Apparently the conditions as well as the function are complex. In some particulars, sweating and susceptibility to tickle go together. The surfaces of the axillæ, the lips, parts about the nose and neck are more susceptible to tickle than adjacent parts. The forehead seems to be an exception, because it sweats easily but is not very sensitive to tickle.

These facts suggest the possibility that sensitiveness to tickle and to sweat have had a related origin, that possibly delicacy of skin in a part has been the cause of development there of a rich supply of sweat glands, or that sweating has produced increased sensitiveness and delicacy of the skin. In the latter case the sweating function would have been preserved because it performed the very essential function of keeping the skin sensitive. There is a clear enough biological reason why certain parts of the integument are more sensitive than others, both on the ground of the touch function, and the protective function of the skin. The manner of growth of some nerve endings in the skin is instructive in this connection. They grow out towards the surface, and continually break off in scales. Moisture of the skin favors the growth of the nerve endings out to the surface, and so directly increases the sensitiveness of the skin in those parts.

If we follow up a little the causes of the peculiar distribution of sensitiveness on the surface of the body, the connection with the function of sweating may be clearer. It is easy to understand, for example, why the neck and the parts immediately about the mouth, must be more sensitive to touch than some other parts of the face, or body. The throat is an exceedingly vulnerable part, and its quick action in combat is indispensable. It is the objective point of strategics in many animals. As a fighting movement, grasping the throat still persists in the human, perhaps rather as an instinctive movement than an intentional attack. So it is very probable that the sensitiveness of the throat, as indicated in susceptibility to tickle, has grown up in connection with combat and that the sweating function has developed as an aid to it. Similar explanations serve for the parts about the mouth.

The rich supply of sweat glands in the palms of the hands and soles of the feet suggest similar conclusions; that they have been produced as adaptations to early prehensile, and locomotor functions, that require sensitive surfaces. Perspiration may have performed the double function of prevention of injury to the skin by contact and friction, and of aiding the development of sensitiveness. If the palm and the sole are the homologues of the plantar surfaces of the ancestors of man, there is abundant reason to expect exactly the condition that we find; the cruder adaptive uses of the hand and foot have given place to other touch needs, but the physiological traces may remain.

There still remains the question whether there is other relation between the psychic states of unpleasantness or any of its special forms, and any even more direct stimulation of the sweat function, analogous to the instinctive reactions in general; whether copious sweating has played any special protective part, or other function, that would bring it under the effect of selection, in a definite manner. It can only be said that the whole question of the psychic origin of sweating is open as a problem in the expression of emotion, or accompaniment of emotion, and that it is deserving of careful study, as are other problems of emotion, both by physiological and psychological methods.

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LITERATURE.

A GERMAN CRITICISM OF AMERICAN SCHOOLS.

An anonymous "German-American" says[1] that the American schools are far from accomplishing what is done in Germany, and thinks the inferiority of the former due to the following causes which teachers cannot obviate:

1. The very heterogeneous nature of the population, representing about every land on earth and every ethnic stock and tongue. To assimilate those of Teutonic heredity with those from far lower stocks seems to him bad for both. Moreover, some of the languages are so remote from our own that about all that the school can do is to teach a little English. Our public schools in many localities are a smelting pot. New human waves are ever breaking upon our shores and must be Americanized.

2. The second source of inferiority is the roving habit of our people. They constantly move and change their locality, owing to the great development of the means of transportation. Nowhere is the population so in flux as here. One fifteen-year-old girl is described, who, since the age of six, had twenty-three different teachers. Some schoolrooms show a surprising percentage of change each year, and, indeed, each term. Especially, in some parts of the West, the population drifts very rapidly. The writer tells of one house which in sixteen years had been inhabited by thirty-seven different families.

3. Our local self-government generally results in control by many-headed boards, representing the various heterogeneous elements in the place, lacking unity, its decisions liable to be reversed by new majorities. There are endless debates, constant tinkering of the laws and programme. Our democracy is always invoking the press and elections, and thus setting up new currents of whiffling public opinion which affect school policies. There are some twenty thousand public and private kindergartens in the country, and perhaps the spirit of the grades above is too much infected by them.

4. In a republic, a law is a law only so far as the board resolves to execute it, and when a law aims for the welfare of future generations, such as that making school attendance compulsory, the citizens evade this duty in every possible way. Very often boards lack foresight to foresee the growth of population and hence it frequently occurs that there are not schoolhouses and rooms enough, so that the law requiring attendance cannot be enforced. Hardly a single city now has school buildings enough to accommodate all its children of school age. Sometimes where population changes rapidly, as in St. Louis, ambulatory schoolhouses that can be moved from one district to another have been found advisable. In general all school attendance laws not enforced by a penalty soon become a dead letter. Indeed this is felt to interfere with freedom. In Germany, out of the round ten million children, only a few hundred escape the school, and the illiterate class is very small. Here the white illiterate voters alone number about seven in every hundred, and among the blacks nearly

[1] Warum kann die amerikanische Volksschule nicht leisten, was die deutsche leistet? Samml. pädagogischer Vorträge. 1905, Bd. XV, Heft 2.

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47½ per cent., despite the fact that in 1903, 251½ million dollars were spent for schools. Sometimes child labor for money both in the city and on the farms is the cause, and sometimes sheer inertness of the parents and school authorities.

5. One cause of disturbance is the confusion between the number of enrolled children and those daily in the schools. Some 30 per cent., on the whole, this author estimates, are absent, and in some cities and states, this proportion rises to 50 per cent. Many of these absentees remain away from school for a long time, and in other cases a certain proportion are present one day and another fraction the next. All kinds of trivial excuses are made. The school authorities recognize this, and in equipping their schools know that a room equipped for 40 pupils will suffice for the 50 who are due there. There are now some 27 million youth in this country between 5 and 21. 16 million are enrolled. The average daily school attendance is about 12 million; those enrolled in colleges and academies, about 300,000. In the colleges and universities, all told, there are less than 175,000. Less than half, then, of the children of school age are in school, and less than three per cent. of those who should be in higher grades are found there.

6. One great aid to many systems has been found in the diverse auxiliary supplementary classes. These seem undemocratic in the United States where people think their children as good as others and better. If a teacher takes pains to prod a dull or listless pupil she is usually beaten in this conflict with stupidity, and collapses mentally or nervously, so that the average time of service of the American teacher is rarely more than five years. This aspect of things is particularly sad when we observe that, for instance, in New York 28 per cent. in one school, 50 in another, are from two to six years older than they should be at their grade. This means that some 600,000 children, if they complete the eight years' course, must remain in school from two to six years longer than they would have remained if they had entered at the age of six and been advanced a grade each year.

7. The German school year lasts from 45 to 46 weeks; the German school week, 2 to 6 days, 4 of which have 6 hours—in all 32 or 33 hours a week. In the United States the longest school year rarely is 40 weeks, and few have more than 35; the school week has 5 days, and the school day 5 hours. This means that $46 \times 33 = 1{,}518$ hours will accomplish more than can be accomplished in 40×25, or 1,000 hours, because the German child has 50 per cent. more time than the American. In America the vacation sometimes lasts as long as 12 weeks. Perhaps the school time cannot be prolonged in this climate without additional nervousness and restlessness. The high pressure which the German pupil endures might be impossible here. The teachers have no power to act in the matter. They cannot change the heterogeneity of the population nor its nomadic disposition, nor can they change the form of government, so that here everything not expressly forbidden is allowed. The folk school is ruled by the folk. People feel hunger, thirst and cold, but they do not feel ignorance. Fools only learn by experience.

8. The English language presents inconsistencies that interfere with its unity. It is not homogeneous, but a bundle of languages rather loosely rolled together. The German sprouts, as it were, from roots that are always able to produce new growths, and has never robbed foreign tongues. English is a kind of pudding-stone, and the effect of this upon the child is unfavorable. In general concrete ideas are Anglo-Saxon, and abstract ideas are French, Latin or Greek. Compare *man* and *friend* with *humanity*. If the child is to classify a dog,

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it must call it *canine*, and the cat must become *feline*. Ziehen = draw or pull, anziehen = attract; gehen = go, Lehrgang = course of study; rot = red, erröten = blush; Huff = hoof, Hufschmied = blacksmith; Sturm = storm, Wirbelsturm = cyclone; zwei = two, zweitens = second; finden = find, Erfinden = invention; ruefen = call, Ruf = reputation; Spielen = play, Vorspiel = prelude; denken = think, Gedanke = idea; stellen = place, Nachstellung = persecution.

The Germans have a technical vocabulary which can be understood by the child because it is Teutonic. Thus German is far better adapted for the first school years than English. Spelling and pronunciation are simple and consistent. The German child of 6 learns to read and write in a few months. The English child needs two full years, and never learns how to spell. Correct spelling is a barbaric mind-breaking process. Thus the Germans can be well started in other tongues while the English are learning their own. The latter tongue, however, has the advantage of being almost without grammatical rules, and therefore runs easily in speech and script; but grammar is the logic of the elementary pupil, and thus the American child lacks logical training.

9. A whole year of our American elementary work is badly broken into by learning our unnatural measures and weights, which difficulty would be obviated if we adopted the metric system. We have three methods of weight—troy, apothecary, and avoirdupois. In surface and length measurement there are two modes which involve two different kinds of arithmetrical work and are utterly unrelated to each other. The German child simply needs to learn deka, hekto and kilo, also deci, centi and milli-meter, -liter and -gram, and all is done, and they have the key to every kind of mensuration.

10. For every fault of society, for every defect and crime in the State, for all diseases of the community, the school is thought to be the cure-all or sanitary hospital. The church demands time for religious work; the State for ethical and legal study; the workman wants his children taught to use tools; the merchant demands bookkeeping and shorthand; doctors require hygienic education; temperance apostles demand schooling in the ravages of alcohol; mothers want housework. Hence we have a vast number of inspectors, specialists for drawing, singing, gymnastics, manual training, etc.

The causes for the inferiority of American schools, which could in part be obviated by teachers, are the following:

1. Time is wasted and work too often degenerates into a kind of play. Kindergarten methods have leavened the grades. The æsthetic inclinations of the female teachers lead to ever new decorations with flowers, garlands, flags, many-colored leaves, distracting colored drawings on the blackboard, etc. Time is wasted in training for orderliness in going, standing, sitting and the teachers are motherly-minded and help the children over difficulties instead of spurring them on to self-activity. Women love to sacrifice themselves for the good of others and thus the pleasure in work is interfered with. Special teachers are almost rampant and are far too much respected, so that the programme is always under discussion. The work is multifarious—sewing, embroidery, cooking, basketry, weaving, paper-folding, moulding in clay, drawing, etc., and Chicago is credited with a school where the children are not taught their letters until they demand them.

2. Antediluvian methods, such as learning by heart, and especially the rage for consuming the hours of instruction by *hearing recitations*. Orthography is taught through the ear, by spelling. Grammar is

neglected. In arithmetic the rule is first given and then it is illustrated by examples. In geography there is more text surface than map surface, while the pedagogical journals give only baby food or pap in the form of petty methods, plans and devices.

3. Weak sentimentality interferes with discipline. Lovely woman is sympathetic even with weakness and defect, and the eternally feminine dislikes to use its sceptre as a rod. Moral suasion is demanded. The people usually assume that a child can do no punishable act if it understands that it is punishable. This is a mistake. Understanding is not sufficient to withhold from evil. The child knows the difference between good and bad, thine and mine, and knows the penalties. Hence law generally recognizes educational punishments for youth and waits until the child is in the teens before its full force is felt. Hence there are children's courts. The view that children should never be punished until they are mature enough to resist evil yields a rich crop of crime which is everywhere on the increase, both in precocity and in frequence. In the school, thus, can be found the causes of many popular excesses, such as the destruction of property, quarelling, lynch law, robberies, with which the daily press teems. The results of this feminization of education cannot be met by President Roosevelt's demand that wife-beaters be flogged, because this comes too late. To abolish corporal punishments for children, as is so often done, and to introduce them for adults is a strange inversion.

4. The sorest point in the whole American system is the insufficient professional training of teachers. In the best or northeastern portions of the United States only about 40 per cent. of the teachers have ever studied at a normal school. In the southern states this proportion sinks to 8 per cent. The American assumes that when God gives an office he gives the necessary intelligence to hold it. The laws of many States demand a license and private local examination boards which test the candidates in certain things. There is no provision, however, that makes these boards know what should be taught or know the history of education and its correlative branches, ethics and psychology, and concerning these matters the board almost never inquires, for it is often constituted of only local notables. The author of this pamphlet has been fifteen years an examiner, and most of all deplores the demand for home talent, so long as there are enough females in the school district who will work for the shabby sum of from three to five hundred dollars or even less.

5. Low salaries are the rule in America. Women must accept what the board offers. They can do what a servant girl can do—refuse to work longer at starvation wages. America spends enormous sums on its schools but far too large a portion of the school money goes for school palaces, free text-books, libraries, high salaries of inspectors, supervisors, superintendents and special teachers but not for the regular class teacher. Even in states like Pennsylvania, Illinois, and Wisconsin there are country schools where barely $300 is paid, and in cities, $400 is the salary to begin with. Now a teacher with a small salary, like every other poorly paid workman, will give only a minimum of energy to the work. In Chicago, was lately initiated a movement among teachers to organize like labor unions to demand better salaries. Men with families, of course, cannot live under such conditions. But raise the salaries of the women and the men would come back to the profession. The schools in many sections are not far above the level of pauper schools. This is wretched short-sightedness. Wages are far higher in other countries, where they are absolutely lower, because the cost of living is far less. Moreover, permanent tenures and retiring pensions do the rest.

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6. Teachers should demand that raise of salary up the grades cease, and that salary increase with age and experience. The latter is the chief school of wisdom in this vocation. Good teachers are needed in every grade, and instead of the best going up and the worst remaining with the primary classes, the pay should depend on efficiency.

7. The last and most surprising error is to allow children to select their own topics of study. The university student is ripe enough to do this. He is choosing his profession and knows his own abilities, but in the lower or even in the middle classes of the gymnasium and real school, would provoke laughter and scorn in Germany. This again depends upon the shibboleth of the individual rights of the citizen and even of the child, in whom possibilities of being president are never forgotten. The child of 14 may ask what is easiest, but to allow him to determine where the chief labor of teaching shall fall is to make the school system the victim of whims.

It is often asked why the Germans are coming so rapidly forward in industrial, mercantile, technical and administrative fields, and it has been sometimes said that there was some secret about it. So there is. It lies in the method and matter of the school work. This is a secret to Americans. The German nation is forced to severe habits of industry to maintain itself with its poor soil, its bad geographical position and its enemies on all sides. It is this quality that has produced the regeneration of the German nation. Every child and citizen must work and think, or pain, and even starvation threatens, People into whose open mouth the bread falls can never learn or even see this secret. Another open secret is that, for every stage, Germany insists upon a preparatory stage. Every technical school demands a certain knowledge as an indispensable condition of its work. This is understood and accepted. The lower schools have their eye fixed upon the higher schools and upon the goal. This the American cannot understand. He always looks to outer standards. His higher schools do not give the training of a good burger school. May God better conditions in America.

This is the substance of the above pamphlet which has attracted great attention in Germany. We call the attention of Professor Münsterberg, who has undertaken the rôle of mediator between the two countries to this: first, as an infringement of his prerogative and second, as something which, so far as he is mediator, he ought to set right or else be held responsible for. G. H. S.

Premier Congrès International d'Éducation et de Protection de l'Enfance dans la Famille, Liège, September, 1905. Brussels: Libraire Albert Dewit, 7 volumes.

The fact that the management of the Belgian International Exposition (held at Liège from April to November of this year) voted to have an international congress of childhood, rather than the traditional educational congress, bears eloquent testimony to the high regard in which the new movement of child study is held.

This congress, organized by Belgian and foreign committees, was held at Liège on the 18th, 19th, and 20th of September. The presidents of the congress were Jules Van den Heuvel, minister of Justice for the Kingdom of Belgium, Henry Dalvaux, member of the Belgian House of Representatives, and Emile Dupont, vice-president of the Belgian senate. Most of the countries of Europe (and America) appointed special committees to co-operate with the Belgian bureau of the international congress.

The congress met in four main departmental sections, as follows: Section one, the study of children; section two, the education of children in the family; section three, the care and training of defective

children; and section four, agencies for the protection of children and youth. The second section—the largest of the congress—was again sub-divided into smaller departmental groups, as follows: Group one, general questions touching the education of children in the family; group two, family education before the school age; group three, family education during the school age.

STUDY OF CHILDREN.

Professor J. J. Van Biervliet, of the University of Ghent, presided over the section devoted to the study of children. Sixteen papers were presented—ten from France, four from the United States, and one each from Holland and Belgium. Professor Alfred Binet, of the University of Paris, presented two papers. In the first paper Professor Binet indicated the necessity of genetic psychologists co-operating with teachers, and he suggested the organization of a permanent international commission to collect and sift such observations and studies. In his second paper he forcibly brought out the need of studying the æsthetic reactions of children as a basis for procedure in school training.

Eight of Professor Binet's countrymen were represented on the child study programme. Mons. P. Malapert, professor of philosophy in the Lycée Louis le Grand in Paris, read an able paper on the pedagogical conclusions from experimental researches into the problem of mental fatigue. He seriously called into question many of the so-called fatigue results, and particularly those based upon researches made with the æsthesiometer by Griesbach and others.

Mr. L. Laberthonnière, editor of *Annales de Philosophie Chretiènne* at Paris, discussed the utilization of psychological experiments in educational practice. While recognizing that educational theory and practice must be founded upon a scientific basis, and granting that psychology is the science that furnishes this basis, Mr. Laberthonnière thought that the distinctly spiritual side of educational work should not be lost sight of. A child, he maintained, is not a thing, but a subject ("L'enfant n'est pas un chose, mais un sujet") and he cannot be educated as we manufacture the ordinary commodities of commerce.

Director Vaney, of a school in Paris, suggested some new methods of testing the mental progress of children; Inspector Bareilhes, of Toulouse, reported on some studies made in the schools of his district on the moral sentiments of children; Marius Dupont, of the National French School for the Deaf in Paris, outlined the anthropometric studies of the French Society for the Study of Children; and brief papers were presented by Mr. Tourt, Mr. Benazet, and Mrs. Rousson on French studies in this field.

Professor Van Biervliet, of the University of Ghent, the president of the section, in an able paper, presented some of the phases of mental work and mental fatigue; and he pointed out, among other things, the need of at least four rest periods or recesses during the school day. Principal J. Klootsema, of the Reform School at Alkmaar, Holland, discussed the utility and study of children; and he questioned the value of some of the methods employed in the study of children in Holland (and the United States).

Four Americans were represented on the child study programme of the Liège congress: Professor William H. Burnham of Clark University, Professor Anna Buckbee of the State Normal School at California, Penn., Principal Harriet A. Marsh of the Hancock School in Detroit, Michigan, and the writer.

Professor Burnham discussed the question of school hygiene in the United States with reference to its relation to the physical and mental

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welfare of children. Progress in this field was indicated (1) by the appointment of medical inspectors of schools in such important cities as New York and Boston; (2) by the study and segregation of the mentally dull and children of arrested mental development; (3) by better provisions in the matter of school lunches; (4) by the establishment of vacation schools; (5) by the extension of school playgrounds; (6) provisions for school baths, and (7) better lighting and heating of schoolrooms.

Professor Anna Buckbee told the Liège congress what was being done in American normal schools in the matter of child study. The value of the questionnaires (particularly those issued by Clark University) was pointed out; also the need of giving the prospective teacher some simple problem in child life for more or less exhaustive individual study. She enumerated some of the American normal schools where child study was given special prominence; and while admitting the limitations of the work already accomplished, she thought the field was full of promise.

Miss Marsh presented the subject of child study in special clubs, and particularly in clubs composed largely of fathers and mothers. Miss Marsh, as readers will recall, has been unusually successful in co-operating with the patrons of her own school in her child study work; and her labors have attracted the attention of Belgians and others interested in this phase of child study.

My own paper prepared for the Liège congress traced the child study movement in the United States from its inception by President G. Stanley Hall, twenty-five years ago, to the present time. The forces employed, the methods followed and the results obtained were all briefly noted. Four results of the child study movement in this country were noted: (1) Greater interest in children and all that pertained to their mental habits; (2) more careful, scientific investigation of many of the physical factors conditioning the development of the young; (3) study of the problem of children's interests and the reconciliation of elementary school courses with the same; (4) the formation of mothers' clubs, parents' associations and like organizations for the moral and social well-being of the child in the home and the family.

One misses the names of many of the leaders of the child study movement in looking over the Liège proceedings. The absence of President G. Stanley Hall, the recognized leader of the movement, is apparent at once; so is that of Professor Earl Barnes, who has done so much to further the work in America and England. Professor Joseph Stimfl of Germany, Professor Frantesek Cada of Bohemia, M. Ferdinand Buisson of France, Dr. M. C. Schuyten of Belgium and other leaders should have been represented at this first great international congress; but the reason of their absence may have been—and probably was—due less to the Liège committee than to these leaders themselves.

EDUCATION OF THE CHILD IN THE FAMILY.

This was the large section of the congress—appealing as it did to parents—and because of its size and the range of its interests it subdivided into three sub-sections. The first subdivision dealt with general problems touching the education of the child in the home. Mme. Lucie Félix-Faure Goyare presided at the meetings of this section. Forty papers were presented at this section. Here again France played the leading rôle in providing most of the papers. Among the noteworthy topics presented by Frenchmen may be noted the following: Need of instruction concerning sex, by Dr. F. L. Blanchard, of Grenoble; need of popularizing education in the family, by Director Le

Brun of Claremont, Inspector Bertin of Saint Mihiel and Professor Chastaing, of Crest; and an interesting paper by Inspector Piffault, of Saint Yrieix, on the superstition and prejudices common in Brittany.

Other important papers before this section were: "The Peculiar Fitness of Women for the Work of Teaching," by Louis Arnauld; "The School in the Home," by Miss E. Boddaert, of Amsterdam; "The Hygiene of Clothing," by Valentine André; "Study of Children in the Family," by Mme. Nadine Koschkine, of St. Petersburg; "The Art in the Home," by Dr. Ernst Buss, of Glarus, Germany; "The Social-medical Aspects of Education," by Dr. Emile Barthes, of Gers; and "Appeal to the Clergy and the Working Men for the Popularization of Education in the Family," by the Abbé Simon, of Namur.

The second subdivision of this department, education in the family before the school age, was presided over by the Baroness de Pitteurs de Budingen, of Liège. Thirteen papers were presented. Dr. Frederick Eby was the single representative from the United States; his paper dealt with the organization of personality. Dr. Kaisin discussed the spinal troubles of young children; Mme. Gest, the sense training of the young child; Maurice Wolff, the question of kindergartens; Leo Claretie, the relation of play to education; Mr. Barrière, the cultivation of the observing powers of children, and Mr. Pacton, the cultivation of the will.

The third division of family education considered the subject of education in the family during the school age. Thirty-three papers were presented, fourteen of which were concerned with various phases of the collaboration of the family and the school. Eugene de Kovalevsky, of the Russian ministry of public instruction, Director Theodore Beck, of the Alsatian School in Paris, Inspector Flotters of Saint-Sivons, Inspector Dolidon of Nantes, and Principal P. Conrad of the Swiss normal school at Thur, were among the leading speakers. George Waforce, of Liège, presented an important paper on Pedology, the science of child study. Two Americans appeared on the programme of this section: Professor Edwin Grant Dexter, of the University of Illinois, on "The Effects of Weather on the Child," and Mrs. Heller, of Omaha, on "The re-instating and vitalizing of the home as a factor in education." The eminent French scholar, Professor Ernest Lavisse, of the College de France, presented a notable paper on the necessity and facility of training children to know and to love nature.

CARE AND TRAINING OF DEFECTIVE CHILDREN.

Section three of the international congress considered problems bearing on the care and training of defective children. Professor Jean Demoor of the University of Brussels presided, and thirty-nine papers were presented. These papers concerned the general problem of physical and psychical abnormalities, children of backward and arrested mental development, the deaf, the blind, truants and incorrigibles, juvenile delinquents, abandoned and neglected children, children who are crippled and deformed, sick and delicate children, speech defects, epilepsy and kindred ailments more or less common to child life.

Many of the speakers before this section of the congress were eminent alienists, and all were specialists in the particular line of defectives which they discussed. The introductory address was by the eminent French alienist, Dr. Bourneville, of the Bicêtre in Paris. Dr. Bourneville offered a scheme of classification for those defective children characterized by mental instability with or without perversion of the instincts; and he gave suggestions for the education and treatment of the different grades of mental deficiency, idiocy, and imbecility. The same subject was treated by Dr. O. Decroly, of the school for the

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feeble-minded at Brussels. Professor Alfred Binet and Dr. Simon, of Paris, discussed medical, psychological and pedagogical methods to be employed in developing and instructing children of arrested mental development.

Dr. George E. Shuttleworth, the distinguished English psychiatrist, presented an able paper in which he told what was being done in England for feeble-minded and other mentally defective children; and Dr. Fletcher Beach, also of England, furnished an important statistical study of the work being done in the United Kingdom. Professor Jean Demoor and Arthur Levoz, in a valuable paper, pointed out the necessity of emphasizing the physical rather than the intellectual training of defective children.

America was represented by four speakers in the third section of the congress: Mr. Charles L. Brace, secretary of the New York Society for the Protection of Children; Miss Anna Gamewell, of the Reform School for Boys at Glen Mills, Penn.; Director M. Anagnos, of the Perkins Institution for the Blind at Boston, and Miss Mary S. Garrett, in charge of a private school for deaf children in Philadelphia.

Mr. Brace presented two papers to the congress, the first of which dealt with the question of truants and incorrigibles. Of the 15,826 cases of truancy and incorrigibility with which his society had to deal in New York city, 33% of the children were Italians, 20% were American, 15% were Russians, 14% were German and 7% were Irish. Mr. Brace's second paper discussed the education of weak and sickly children. Miss Gamewell presented some of the phases of the mental training of juvenile delinquents; and Miss Garrett, who is one of the leaders in the American movement for the teaching of speech to the deaf, presented an altogether interesting paper on her own lines of work. Dr. Anagnos, the veteran director of the historic Perkins Institution, made an earnest plea for a more liberal education of the blind.

Director Dario Trentini, of the institution for the care of orphans, illegitimate and abandoned children at Matarello, in the Tyrol, presented two papers on his own particular lines of work. The training of epileptics was discussed by Dr. Alexandre Paris, of the University of Nancy, and Dr. Kölle, of Zurich. Speech defects, aphasia and kindred disturbances were presented in papers by Dr. Jean Gressler, M. Dufour and Dr. Georges Rouma. Mme. Aurep-Nordin told the congress of the schools for the deaf in Sweden, and Professor Edouard Drouot, of the National Institution for the Deaf at Paris, presented the problem of family education for young deaf children. Education of the blind in France was the subject of a paper by J. Sternheim; and Dr. Bourrillon, director of the French home for convalescents at Saint-Maurice, urged the establishment of special schools for the crippled and the deformed.

ASSOCIATIONS FOR THE PROTECTION OF CHILDREN.

The fourth section of the congress discussed problems touching the protection of childhood and youth. Professor Dejace, of the University of Liège, presided and thirty-eight papers were presented.

Not less than eight of the papers dealt with the temperance problem and the kinds of instruction for children on the effects of alcoholic stimulants on the human system. Two papers handled the tobacco habit and its effect on the development of the young. These papers emphasized the need of careful instruction on the effects of stimulants and narcotics; and as many of the speakers were alienists and neurologists, they advocated a saner method of procedure than that followed by the temperance crusaders in our own country twenty years ago.

The subject of the moral purity of youth was the topic of a note-

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worthy address by Henri Hayem, secretary of the French League for Public morals; and Mlle. Chaptal, in an important paper, told what the Catholic Association for the Protection of Young Girls was doing in France to promote the moral welfare of the Third Republic.

The Ministering Children's League movement was the subject of several papers, as well as divers other agencies for the amelioration of the economic conditions of the children of the poor. Other questions before this section of the congress were: Vacation schools and colonies; protection of illegitimate children; school journeys; prevention of cruelty to animals; societies for the prevention of cruelty to children; and measures for the prevention of the spread of tuberculosis among children.

Two Americans were represented on the programme of the fourth section of the Liège congress: Judge R. S. Tuthill, of Chicago, on the nature and workings of the juvenile courts of the United States; and Professor Charles R. Henderson, of the University of Chicago, on the benevolent movements in this country for the protection of children in the family.

WILL S. MONROE.

Experimentelle Didaktik; ihre Grundlegung mit besondere Rücksicht auf Muskelsinne, Wille und Tat, von W. A. LAY. Wiesbaden, 1903. pp. 595.

Lay's book obtains its especial importance from the fact that it is, so far, the only work devoted entirely to the subject of Experimental Pedagogy. It is in no sense a compendium of results from experiments, but is rather written with the purpose of pointing out that all phenomena of consciousness have a pronouncedly motor side—Lay himself would say a motor basis—which demands investigation. A careful experimental study of Pedagogy would, Lay says, put an end to the speaking of the methods, or pedagogy, of this man or that man, as a system of individual thought; but would make Pedagogy a science, the same all over the world.

True Pedagogy must be based upon proper Psychology, the fundamental proposition of which is that in all animal life a reaction follows every irritation; "a physiological unity of nerves and muscles is present and has come to a higher development hand in hand with the perfection of the physiological-psychological fundamental processes. This unity, the type of all movement, is the *sensory motor fundamental process*." It is the problem of Pedagogy to make this the fundamental principle of teaching and instruction. "All phenomena of consciousness have a motor side," is the one thing which is emphasized again and again.

Lay first considers the Muscle-sense, and after demonstrating that there is no Innervation-sense, he shows that at the bottom of our entire mental life, are motor images and the Muscle-sense, the latter always of peripheral nature, forming, with sensations of position, very varied complexes from sensations of the joints, tendons, ligaments, muscles and skin. There is no perception without the movement of a sense organ, there is no sensation, idea, feeling, no act of willing without a motor sensation and a motor image. How important this is, he demonstrates by experiments in drawing, showing that "sensations of movement and touch are of almost as great value as that of light." The only other thing constantly emphasized is that "Representation is quite as important in Education as is Perception." From experiments with the motor organs he concludes: "Just as the impulse to activity in the sense organs shows the impulse to make observations, so the impulse to activity of the motor apparatus shows the impulse to work formatively with the world—to represent. There exists a reciprocal action between movements and the development of the soul;

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where there is mental slowness there is always an unsatisfactorily developed muscle sense."

Feeling, interest, attention, suggestion, assimilation, association, imagination, thinking, practice, memory, learning and habit are then taken up in order; the work done by the better investigators is résuméd, everything tending to show the great importance of the sensory-motor process, the Muscle-sense and movement. Not only feeling and impulse, but also sensations and perceptions have their tendencies to go over into movement. "The psychological fundamental process shows us that the Will and Intellect are identical. The more instruction takes into account the motor side of consciousness, to give it the shape of instruction in *work*, just so much the more will it obtain for the development of the Will and for education."

The two more extensive experiments which Lay carried out are on (1) Perceptual types, and (2) Organization and Function. From the first he concludes: "In Orthography, the visual element predominates over the acoustic, the motor over both." It is not true that most people are auditory minded, as has been so often stated. Lay determined that in spelling and arithmetic the motor images of speech take a very large place, with all scholars; all pupils are speech motor, not all are writing motor. There are no perceptual types in the sense that word images and number images consist *only* in sound pictures or written pictures, or in the speech-motor or writing-motor images, but it is well to speak of auditory, visual and motor types in the sense that one predominates. Many pupils belong to one type in number images and another in speech images. A pupil may belong to one type in thinking of *things*, but to another in thinking of the words which represent the things, or of abstract terms. Practice and instruction can change a scholar from one type to another, or from a mixed type to a predominant one. From the earliest school years, all instruction should be made to appeal to as many senses as possible, else the instruction will mean practically nothing to some, and not develop others along all lines.

As to Organization and Function, exhaustive experiments showed that all scholars, and hence classes, have a rhythm of psychic energy grounded deep in their natures; that the psychic energy of each scholar moves up and down in waves during the day, reaching two high points, one in the forenoon, one in the afternoon. The psychic energy of a class is highest in March, lowest in July and again in October. The plan of having all the instruction in high schools in the morning is wrong; for while perhaps the wave of psychic energy is a little higher then than in the afternoon, it is more constant during the afternoon. The different studies of fatigue of school children are résuméd with the conclusion that the German school system, at least, is radically wrong; and that no person, child or adult, should work mentally so long as is demanded in the higher schools. In closing this section examinations are severely criticised, "with the express purpose of tearing such a degenerate arrangement to pieces." The last part of the book is devoted to "The nature of the Will, and of volitional activity, and of their relation to things innate, and that which has been made our own through the influence of the world around us." Here Lay deals more with theories and with philosophy, all tending to establish his basal belief in the sensory-motor process as the fundamental principle of Psychology and Pedagogy alike.

"Experimentelle Didaktik" is a real contribution to Pedagogy; perhaps one of the most important of the last decade. Aside from the experiments which Lay conducted, it is much more than a compilation of what other people have done and written, in that it has taken

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many commonplace beliefs and theories and placed them upon a sure psychologic ground. The theory that Attention is a complex of essentially motor elements, is stated here with refreshing clearness, and the chapter on Perceptual Types would alone make the book a valuable one. JAMES RALPH JEWELL.

Lo Svilluppo dell' Intelligenza nella privazione simultanea della vista e dell' udito. GIULIO FERRERI, Roma, Tipografia di Giovanna Balbi, Via della Mercede, 28-29, 1905. pp. 14.

This pamphlet of fourteen pages is the address given by Prof. Ferreri at the International Psychological Congress held at Rome in April, 1905. Its subject is Helen Keller, to whom Prof. Ferreri gave private instruction in Italian for sixty lessons, during which she learned to read and write Italian. In the course of these lessons, Prof. Ferreri had exceptional opportunities of conversing with Helen and of becoming familiar with her intellectual development. In this resulting study, he seeks to correct some of the exaggerated statements in regard to her and to interpret the actual facts, which are sufficiently remarkable without exaggeration. It has been said that Helen Keller has a peculiar musical sense and can distinguish between the style of Beethoven and that of Schumann, that she writes good poetry as well as excellent prose and that she can distinguish colors by touch. Such statements are, of course, impossibilities, but it is true that she enjoys music and uses language in regard to color in the usual way. But this implies neither musical sense nor color perception. The fact is, that while Helen Keller does not possess even an extraordinary delicate sense of touch as compared with others who are blind, her hand has, through long years of training, developed wonderfully delicate muscular perceptions, which enables her, not only to appreciate beauty of form and outline, but to recognize personality and often to interpret unconscious muscular movements on the part of others, so that she is aware of their moods and emotions. Her enjoyment of music is due to this same delicate muscular perception, which gives her a keen appreciation of measure and rhythm. In her use of language it must be remembered that she has learned many things by instruction about them, has read much and come in contact with many cultivated people. But this knowledge *about* things is to be sharply distinguished from knowledge gained directly through the senses, and it is to a failure to do this that most of the exaggerated statements about Helen Keller are due. But Prof. Ferreri thinks that she also shows "a certain abstraction from the specific sense of touch which ought to be taken into account in considering her intellectual activity, as if actually her intelligence had been developed without the mediation of the specifically given sensations," and that she furnishes a living argument against the materialistie dictum, "Nihil est in intellectu quod prius non fuerit in sensu." The results attained in Helen Keller's education should, he thinks, furnish inspiration for the instruction of all such doubly deprived children, and that the educational principles of Miss Sullivan, which are truly Herbartian, though worked out independently, should be of universal application.

THEODATE L. SMITH.

The Negroes of Columbia, Missouri. A Concrete Study of the Race Problem, by W. W. ELWANG. University of Mo., 1904. pp. 69.

This Master's dissertation is based upon a study made during three years of residence in a community of which 30 per cent. are negroes. The negro problem, the author believes, is one essentially of economic adjustment. Booker Washington has demonstrated the practicability of industrial training on a large scale but only the federal govern-

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ment can make it effective. They are essentially a nature people and the federal government should regard them, like Indians, as its wards. The author studies the occupation and wages of the negro population of this place, the religious life, the education of the preacher, etc. In the churches the struggle between the old hallelujah darky with genuine emotion and the proper younger generation who try to imitate the perfunctory service of the white church are plain to see. The burden of all the fervid message of the pulpit is "Do right and you will go to heaven." Immorality and a very devout spirit often go hand in hand. Superstitions, especially belief in witchcraft in the form of haunts, is very common. Health statistics show that the negro has less power to resist in the struggle of life than the Caucasian. In the United States as a whole the average age of deaths for the white is 35.8; for the negro, 28. The negroes have a very high death rate by constitutional disease, like consumption, pneumonia, heart and liver troubles. They take very few hygienic precautions. Bath-rooms are almost unknown. 540 of the families live in houses of 3 rooms; 438 in two; 236 in 4. Most of the families have four or five children, but those having three and six are a close second. More than half rent their so-called home. This herding, of course, is as unfavorable for morals as for health. The average rent per family per year is $69.72. Deliberate pre-natal murder is very common. Their distinction is "sexual concretism," physical stimulus being their chief craving and enjoyment. There is a good deal of promiscuity, and the author reaches the conclusion that from 85 to 90 per cent. of their women are unchaste.

The author computes that if one ship, carrying one thousand passengers should sail every day in the year, it would take more than twenty-five years to deport those now living, and the transportation alone, at fifty dollars per capitum, would cost five hundred million dollars. In addition to this they would have to be remunerated for the property they now hold, which aggregates seven hundred million dollars.

"Politically they ought to be frankly disfranchised. They are political idiots, and it is sheer madness to misuse and prostitute the privilege which the Anglo-Saxons won for themselves only through a thousand years of painful history. This would certainly work an immediate hardship upon the worthy few, but in a complex race question such as this, the individual can have no rights, and vicarious suffering is ever the cost of progress everywhere. It may be very important that a few intelligent and worthy negroes should have the right to vote. It is more important that the mass of negroes should be put into the way of progress, and the fact that the negro votes is an insuperable bar to his progress in the south. Religiously they ought to be under the guardian tutorship of the white churches. While we are sending well-educated, trained and expensively equipped white missionaries to die of fever among the savages of Africa, we still find it consonant with duty to turn over the semi-savages at home to the guidance of ignorant, frequently self-conceited, and often immoral negro preachers. We have taken hold of this entire negro problem at the wrong end." For their police control there should be separate police courts, as we have for offending juveniles. Their treatment should be less punitive and more reformatory. Their education should be adapted to their own needs and not be identical with that of the white children, as the Missouri constitution requires. The segregation of the negroes is as complete as it can well be. The whites desire to be helpful, but the young negroes are often full of distrust and latent animosity. In the competitive struggle the negro al-

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ways goes to the wall and he can have no future without miscegenation. "This does not mean that there ought to be miscegenation, but only that without it the negro's case is hopeless." No matter how well trained he is, the negro cannot compete with the white man, for education does not transform a man morally. What he chiefly needs is work habit.

The Native Races of South Africa, by GEORGE W. STOW. Swan Sonnenschein & Co., London, 1905. pp. 618.

This book was written some years ago, but the author's premature death prevented its publication. The manuscript was purchased from Mr. Stow's widow by Miss Lucy C. Lloyd some time ago, but is only now printed under the editorship of George M. Theal. Mr. Stow went to Africa in 1843 and practically completed his study and wrote a preface to his book in 1880, dedicating it to Sir Bartle Frere. The author wrote from long acquaintance and was a very careful observer. He studied the traditions of the tribes, mapped their migrations and shows how certain tribes are descendant and apparently doomed to extinction while others are ascendant, gives a history of a horde, the lives of representative chiefs, accounts of various clans, their occupations, utensils, dress, something of their languages, drawings, social customs, methods of hunting, industries, etc. All in all, it is a book of very high value, and every one interested in Africa will feel a debt of gratitude to those who have secured its publication.

Das Geistesleben der afrikanischen Negervölker, von A. SEIDEL. A. Schall, Berlin, 1904. pp. 340.

The author begins with a brief account of the modern Egyptians, gives representative stories, proverbs, Märchen, songs. He then passes to tribes of the Hamitic stock, and makes similar selections of traditions and folk-lore, from half a dozen of the Bantu tribes and finally does the same for mixed races. The book is a compilation, but the selections are interesting.

The story of the Congo Free State, by H. W. WACK. With 25 illustrations and maps. G. P. Putnam's Sons, New York, 1905. pp. 634.

The author has been a student of mid-African affairs for seven years, and has met His Majesty the King of the Belgians who gave him access to the adminstrative archives. This book gives the story of the founding and development of the Congo Free State, describes the horrors of the Arab slave trade, the Berlin conference, the Brussels conferences, the campaigns against the Arabs, the mutinies of the Battela tribe, navigation, postal service, trade, revenue, missions, schools, and the Congo campaigns, as the author terms them, that have been conducted in the United States and in England. All the charges of cruelty, torture and extortion, which have been within recent years so persistently circulated against the Belgian government on the Congo, the author declares to be instigated by English interests. Now that rubber and coffee have, at last, after a long period of loss and doubt, made the land profitable, England has grown envious and impatient of this immense wedge, a third as large as the United States, which separates different English possessions in Africa. The book is thus confessedly more or less partisan, and the inference would be irresistible, from the facts which it presents alone, that the condition of the Congo Free State is now the greatest triumph the world has yet achieved in colonial administration. England, it is repeatedly intimated, is far behind in her methods. Great stress is laid upon mission work in this volume, and there are repeated pictures of very large groups of children on their knees in prayer. But little

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is said about the rubber trade in connection with which the chief charges of atrocity are made.

The Unveiling of Lhasa, by EDMUND CANDLER. Edward Arnold, London, 1905. pp. 304.

These pages, we are told, were mostly written in the dry, cold wind of Tibet, when the ink was often frozen. Many of them are revised from the contributions of the author to the daily press of which he was a correspondent. The causes of the expedition, its progress, the various battles, on the way to Lhasa, the city and its temples, the far-famed Potala, the flight of the Grand Lama, and finally the retreat, are told with very many interesting illustrations. Instructive and fascinating as it is, it can hardly be compared with the more thorough work covering the same ground by Waddell.

Die graphische Darstellung als Mittel der Erziehung zum musikalischen Hören, von ROBERT HÖVKER. Otto Schulze, Göthen, 1899. pp. 31.

Robert Hövker, as a result of much experience and labor, has devised a graphic scheme of presenting music, particularly fugues and sonatas, to the eye. For this purpose he dispenses with all but the heads of notes and connects these by lines, omitting all time signs, and carrying the chief theme of form picture. He often, too, dispenses with one, two or three lines of the staff, so that his scheme slightly suggests the holes in a pianola roll connected with lines. By supplementing this method with colored dots and lines and by the occasional use of small circles, it is possible to represent one, or, indeed, a number of parts and instruments in an orchestra. Verbal explanations appended show the leading motive, subordinate phrases, elaborations and the various other divisions. By this means those who do not read music, it is claimed, are able to follow it more intelligently and to recall the chief motives. Their attention is called to symmetry, opposition, reversal and other æsthetic elements, and particularly for those eye-minded, and also for those who desire assistance in penetrating the mysteries of musical theory, it may be of assistance. It is urged, too, that young children by this method are able to apperceive and intelligently appreciate a much more refined and advanced kind of music than would otherwise be possible. Of course no one can judge the merits of such a scheme without considerable observation of its actual working in practice. It has, however, interesting suggestions for the psychologist.

The Fifth School Year. A course of Study with Detailed Selection of Lesson Material. Arranged by Months and Correlated by Herman T. Lukens. A. Flanagan Company, Chicago, 1905. pp. 213.

Dr. Lukens is probably the most learned man in America who is focusing his attention upon teaching methods in the normal school. He has been for years working upon the fifth grade. What is here presented rests on the assumptions of the correspondence of development in the individual and the race; that the curriculum subjects should be presented historically; that the psychological is better than the logical order; that the chief aim of school activity should be to develop right interests and ideals, so the best material for an age is that which arouses most interest; that learning is essentially an active motor process and not a passive one; that the process is the goal; that there is no sequence of studies in an ideal curriculum; that the social life of the child is the basis of correlation; and that interests must be organized with depth and not superficially. The work begins with a prospectus of the fifth year for each school month; for instance, for

September the work of nature study, geography, history, literature, number, language and the arts are each described with detail and with abundant co-ordinations, though with sufficient independence between the different branches. Very interesting is the author's history chart, where a vertical column, devoted to each decade, contains rough pictures, symbols, maps, etc., designed to illustrate the chief events from 1400 to 1900. Pictures of individuals here play an important rôle and all kinds of symbolic devices are used to symbolize the main events. An admirable system of weather record charts is kept. An apparatus for latitude and longitude, and a model of the Santa Maria are made; so are numeration tables. The floor is made into a map, and all kinds of tables studied by metric systems of presentation. It is impossible to describe in detail even the important points in this book. It is the newest book of the year and the most suggestive. It ought to be in the hands of, and if so, would be used by, every teacher in this grade in the country.

The Teaching of Modern Languages, by LEOPOLD BAHLSEN. Translated from the German by M. Blakemore Evans. Ginn & Co., Boston, pp. 97.

This is a book of great value. The author first gives a historical sketch of the methods of language teaching. He then discusses the reform of modern language teaching in Germany. Another chapter is devoted to pronunciation, sound physiology, phonetic transcription, etc. He then describes the first instruction to French and German on a phonetic basis. Then comes an outline of his analytic inductive method and a description of the German grammar as taught by it. The work concludes with an account of a reading course in German for a secondary school.

Physics, by CHARLES R. MANN and GEORGE R. TWISS. Scott, Foresman & Co., Chicago, 1905. pp. 453.

This book marks something of an epoch. The most striking feature of it is its modernity. It is essentially up-to-date, and its illustrations, of which there are 237, include the newest developments in this rapidly growing field of science. Another feature of it is the reduction of mathematics to more wholesome proportions. The attention and interest of the student are appealed to by questions and suggestions at the end of each chapter. Some of the experiments seem clumsy but are made in closer proximity to nature than are most of those performed in the laboratory. Much of the old lumber of the old physics text-books has been dropped. We know none of the many recent text-books in physics which seem so well calculated to appeal to the natural interests of boys in such problems.

The Elements of Business Law, by ERNEST W. HUFFCUTT. Ginn & Co., Boston, pp. 329.

This book seeks to present leading principles by means of simple and concrete examples taken generally from cases actually decided in the court. Then follow problems without conclusions, in order to afford exercise upon the principles drawn from the text and the examples. These, too, have chiefly been taken from the decided cases, that they may be used as control. This method will be more interesting and instructive than dealing with abstract dogmatic statements.

Marriage and Divorce, by FELIX ADLER. McClure, Phillips & Co., New York, 1905. pp. 59.

The writer pleads for separation with cause, but never divorce. The separation may be renewed again and again and be in effect per-

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manent, but the difference is that in separation there is no permission to re-marry, and so far as release from intolerable conditions is concerned, separation entirely answers the purpose. Marriage is a relation between the living and not between the living and the dead, so that the permission to re-marry should not be given.

Eleventh Annual Report of the Schoolmasters' Association of New York and Vicinity. 1903-04.

This volume is made up of sixteen articles, by as many different men on educational subjects. Perhaps the most interesting are those on Pedagogy in 2000 A. D., The Batavia Experiment, The Ultimate Responsibility for Clean Athletics, The Mind of the Undergraduate.

Selections from Standard French Authors. A Reader for First and Second Year Students, by O. G. GUERLAC. Ginn & Co., Boston. pp. 214.

Latin Composition for Secondary Schools, by BENJAMIN L. D'OOGE. Parts 1, 2 and 3. Ginn & Co., Boston.

Manual of Medial Writing Designed to Accompany the Medial Series of Writing Books, by HORACE W. SHAYLOR and GEORGE H. SHATTUCK. Ginn & Co., Boston, 1904. pp. 38.

Little Brother to the Bear and Other Animal Studies, by WILLIAM J. LONG. Wood Folk Series. Book Five. Ginn & Co., Boston, 1904. pp. 178.

The Dramatic First Reader, by ELLEN M. CYR. With illustrations by Edith Browning Brand. Ginn & Co., Boston, 1905. pp. 104.

The Supervision of Country Schools, by ANDREW SLOAN DRAPER. C. W. Bardeen, Syracuse, N. Y., 1904. pp. 43.

The Woman Trustee and Other Stories About Schools, by C. W. BARDEEN. C. W. Bardeen, Pub., Syracuse, N. Y., 1904. pp. 259.

The Value of Symmetry in Education and Character, by GEORGE F. EAMES. Journal of the American Medical Association, June 18, 1904. pp. 8.

The Library and Its Administration. State Normal School at Worcester, Massachusetts. Pamphlet A. pp. 7. Child Study—Observation of Children. Pamphlet B. pp. 6. "Larger" Kindergarten Material. Pamphlet C. pp. 3. The Platform Exercise—Oral Expression. Pamphlet D. pp. 12. Apprenticeship—Practice-teaching. Pamphlet E. pp. 10. Graduates' Class Reunions. Pamphlet F. pp. 4.

Internationales Archiv für Schulhygiene. Herausgegeben von AXEL JOHANNESSEN & HERM. Griesbach. 1. Band. Wilhelm Engelmann, Leipzig, 1905. pp. 158.

Memory, and What Can Be Done to Improve It. Pelman School of Memory. New York City, 1904. pp. 56.

Twenty-First Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1899-1900, by J. W. POWELL. Government Printing Office, 1903. pp. 360.

Twenty-Second Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1900-1901, Part I, by J. W. POWELL. Government Printing Office, Washington, 1904. pp. 320.

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NOTE.

CHILDREN'S ATTITUDE TOWARD CLOTHES. Miss Lillian A. Rusling has made a study, not yet published, of children's attitude toward clothes by asking them to answer the following questions: 1. Do you often tear, soil, or lose your clothes, hat, shoes, or anything you wear? 2. How do you feel when you do it? 3. Why? 4. What particular thing that you wear would you most dislike to tear, soil, or lose? 5. Why? She tabulated about 1,700 answers of children 8 to 13 years of age.

Her results indicate that boys' recklessness with clothes decreases from 8 (80%) to 12 (60.5%), after which it increases till 13 (69%); that with girls this recklessness reaches its minimum at 10 to 11 (65%), after which it increases till 13 (80%).

The answers to the question, "How do you feel when you do it?" she grouped under "Sad," "Mad," "Glad." With the first the percentage with the boys was lowest at 9 (55%) and highest at 12 (61%); with the girls it was lowest at 8 and at 13 (60%), and highest at 10 (65%). Anger was less prevalent than grief and more prominent with the boys than with the girls. With the boys it was highest at 10 (38%) and lowest at 13 (32.5%); with the girls it was most prominent at 8 (38.5%) and lowest at 13 (30%). Very few were glad; 8.5% of the boys at 10 and 7.5% at 13, but only 1% at 11. With the girls there was a gradual increase from 8 to 13, the percentage ranging from 1.5 to 10%.

The reasons *why*, she groups under three rubrics, "Pride," "Fear," "Because." She finds that "Pride," *i. e.*, because they are proud of their clothes, is most prominent with both boys and girls. With the boys it is lowest at 12 (43%) and highest at 13 (70%) with an upward wave also at 10; with the girls it rises rapidly from 9 to 10, remains the same from 10 to 12 but rises rapidly toward 13 when it reaches its maximum (65.5%). Boys show more fear than girls, probably because the rod is spared on them less than on the girls, and is most prominent at 12 (35%); with the girls it is most prominent at 8 to 9, decreases till 11 (13.5) and again increases till 13 (17.5%). Many gave no particular reason but simply said "because." This was most prominent at 9, 31% for boys and 41% for girls, decreased somewhat abruptly at 10, 18% for boys and 27% for girls, after which it varied little. The percentage of girls that give this answer is uniformly about 10% higher than that of the boys.

Ornamental articles of dress cause most regret when they are lost or torn. It is not so much the fear of punishment as the idea to do without the thing they like or are proud of that causes them worry.

Miss Rusling thinks her results show that accidents to children's clothing are not always due to natural depravity, because so many feel sad at their loss. That boys are as vain about clothes as girls. That little boys worry most when their hats are temporarily mislaid, but that girls seem more attached to mittens and coats.

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